# Kashyapiyakrishisukti

## (A Treatise on Agriculture by Kashyapa)

Agri-History Bulletin No. 4

Asian Agri-History Foundation

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**(A Treatise on Agriculture by Kashyapa)**

Translated

by

**S M Ayachit**

Commentaries

by

**Nalini Sadhale and Y L Nene**

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## About the Translator

Dr Sadashiv Moreshwar Ayachit was born in 1929. He obtained MA in Sanskrit/Pali in 1953 and PhD in Sanskrit/ Linguistics in 1959 from the University of Poona, Pune, India. He has had a distinguished professional career and he retired in 1987, after working for 23 years, as the Manuscripts Officer, Nagpur University, Nagpur, India. He distinguished himself by serving on several prestigious organizations, committees, and boards. He has several publications which include translation of Dr Panjabrao Deshmukh's thesis into Marathi, titled "*Vaidik Sahityat Dharmacha Ugam ani Vikas*". He is presently working as Founder/Co-Director of Itihas/Sanskrit Sanshodhan Kendra, Nagpur. Dr Ayachit was honored by the Maharashtra Government in 1997 and was specially felicitated by the Chief Minister of Maharashtra in 1999.

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# Contents

# Foreword

The Asian Agri-History Foundation (AAHF), a non-profit Trust, was established and registered in 1994 to facilitate dissemination of information on agricultural history to promote research on sustainable agriculture in South and Southeast Asia region. This region had generally provided food security to its population for several millennia, with only occasional famines in a few limited pockets due primarily to drought. Farmers in the region had evolved some of the most sustainable agriculture management technologies suitable for different agroecoregions. There is a great deal to be learned from the traditional wisdom and the indigenous, time-tested technologies that have sustained the farmers of South and Southeast Asia in the past. The historical perspective of gradual development of traditional technologies will provide clues for (i) understanding how farmers adjusted to changing environment in the past; and (ii) developing appropriate technologies leading to prosperous, sustainable agriculture. One of the major objectives of AAHF is to disseminate information on agriculture of the past by translations, with commentaries on the scientific content of texts. The aim of such commentaries by experts is to stimulate research to confirm, or otherwise, many old practices.

AAHF has so far published three bulletins: Vrikshayurveda (The Science of Plant Life) by a physician Surapala (c. 1000 AD), Krishi-Parashara (Agriculture by the sage Parashara) (c. 1st century AD), and Nuskha Dar Fanni-Falahat (The Art of Agriculture) (a manuscript written in Persian in c. 1650 AD) by Dara Shikoh, a Mughal prince.

The translation of the Sanskrit text, Kashyapiyakrishisukti, was completed with dedicated efforts by Dr S M Ayachit, despite health problems. Dr Ayachit retired from Nagpur University, Nagpur, India and has been associated with the Itihas/Sanskrit Sanshodhan Kendra at Nagpur. He currently lives in Pune, India. Though Dr Ayachit wanted the use of International Phonetic Alphabet in English translation, we have not done it for various reasons.

A copy of the manuscript (No. 38J8) in Devanagari script was obtained from the Adyar Library, Chennai, India. The copy was made by hand by Pandit V N Sastri and was checked together by Sri N R Bhat and Pandit Sastri himself. A photocopy of the above was made available to the AAHF by Sri S K Chitale, who had obtained it from Sri R M Pujari. We are most grateful to all the above for their kind assistance. Dr Ayachit got another copy of this manuscript which was also used for this work (manuscript no. xxxviii-i-8; TR 871, 1930 AD).

Kashyapiyakrishisukti was translated in English in 1985 by G Wojtilla and was published in Hungary. Thus the text by Kashyapa is not being translated for the first time. The AAHF undertook the present assignment because (i) Wojtilla's translation is not easily available; and (ii) the translation was apparently not reviewed by an agricultural scientist.

Special gratitude is due to Dr (Ms) Nalini Sadhale, Professor of Sanskrit (retired) Hyderabad, India who reviewed the translation and wrote it in the present format. The Sanskrit text was rewritten by hand by Mr Prabhakar R Jogdand and commentaries have been written by Dr Sadhale and Dr Y L Nene. At the end of each verse in the Sanskrit text, the verse number has been indicated in Devanagari; however, to assist readers corresponding Arabic numerals have been given at every tenth verse throughout the text. Each verse has two lines considered as 'a' and 'b' and indicated so in the translation. For example, 10a is the first line of verse 10 and 10b is the second line. All the names of plant species appearing in the text have been listed in Appendix 1 prepared by Y L Nene.

The AAHF acknowledges the contributions made by S M Sinha, Sheila Vijayakumar, S Lalitha Annapurna, K Anna Purna Devi, Sridhar Rao C, and P Nageswara Rao, in art work, designing, editing, typing, and formatting the bulletin.

**Y L Nene**
Chairman, AAHF

# Translator's Preface

I had already intended to translate the text here being presented three decades ago when one of my friends had suggested procuring the manuscript for him to work upon. I was then in charge of the Manuscripts Department of Nagpur University, Nagpur, India and was in contact with concerned scholars. However the project was then somehow deferred. Therefore, when my young friend (now propagating research in Vidarbha's history) Sri S K Chitale introduced me to the Asian Agri-History Foundation (AAHF) and opened up the project again, I gladly accepted it. He was responsible to request Dr Y L Nene, Chairman, AAHF to again take up the topic which was sidetracked. I have no adequate expression to thank these two scholars for the loving care with which they have treated me all along. I was then attending the Indian History Congress session at Chennai, India, which enabled me to personally contact the Adyar Library in Chennai.

I got a photocopy of a transcription from an original Tamil manuscript (TR-871-63419-XXXVIII-i-8). This consists of 113 folios of the text and 19 folios giving a fuller description of the contents, presumably prepared by the transcriber/copyist, who records at the end "*Iti shilashasanaparishodhakena panditen Vijayaraghava-charyen likhitam*". The copyist informs us that he was working as an epigraphist to the government, and that he completed the work at Tirupati on 19 December 1930. The title of the work is given as "*Kashyapamunikathita Kashyapiyakrishisukti*". The copy incorporates the base text. Verse numbers are not given. The copyist has done his job ably, neatly, and responsibly. He deserves credit for making this rare text available to us eliminating the textual difficulties as far as possible. In spite of a few vagaries of a southerner, his writing seems sufficiently reliable. No other copy of this work is known to me. The fact of its publication/translation by a foreigner was made known to me only recently.

Sri Chitale had handed over another transcribed copy of this work to Dr Nene, who got the text rewritten for printing it in this volume. This copy belongs to Sri G G Joshi Pratisthan of Nagpur. It bears the transcript No. 38J8. It was prepared by Pandit V N Sastri, who compared it with the original with the assistance of Sri N R Bhat. This copy contains verse numbers, which are followed in this volume (after a few corrections). The numbering obviously seems to be the copyist's work. This copy is much inferior in comparison with that described above. In a few places, the copyist could not correctly read the original words; he therefore wrote them wrongly, and also left lacunae (which now could easily be filled up).

I had completed the translation in Nagpur and finally submitted it to Dr Nene on 7 June 1999. Our correspondence started in December 1996. For a number of reasons, the translation work lingered on, for which I am wholly responsible. In order to overcome some sentential difficulties, I had planned to group the matter under sub-headings, because the text did not lend itself to the desired succinctness. I also followed the International Phonetic Script, which has come to stay in research publications. However, I could not find time

to recast my analytical rendering. I am extremely glad to find the translation now in a different format, ably done by Dr Nalini Sadhale, though of course my agreement to this presentation is not complete. I am heartily grateful to her for sincere and scholarly work, as also to Dr Nene for his constant supervision over the whole project. Since I was not involved in this later technical procedure, carried out far away from my place, I could only correct and improve the final proofs, which were otherwise perfect. I have tried not to disturb the final presentation copy. The text also in its rewritten form had to be kept untouched.

The date of the author is as usual a vexed problem without any clue to its chronological position. The title suggests, however, that the author belonged to the school of Kashyapa (a hoary antiquity), and reminds Manu's disciple Bhrgu, who wrote the famous Smriti in his name and on his behalf. The simplicity of the author's style is as deceptive as Valmiki's Ramayana. References to a few writers on cookery are hardly helpful to us in our present knowledge of the ancient works. I therefore refrain from any remarks. The question can best be left to personal conjecture. Though this question seems beyond settlement, the text is undoubtedly interesting for its bold views on a number of topics, and for its informative data. Apart from regular agricultural subjects, the author touches town planning, state responsibilities, marketing business, cooking, diet and nutrition, social thinking, and hints for legislation. Even communistic trends are no bar to this writer.

There is ample scope for further research in this field. The varieties of crops vis-à-vis extensive synonymy are a problem. If every single term is presumed to be non-convertible, it can be ventured that all the names express, or at least represent, so many varieties. Questions arising from this assumption are many, and the solutions disputable. To take just one haphazard instance of common occurrence, *rasala* stands not only for mango, but also signifies olibanum (*Boswellia* spp.), breadfruit, wheat, and sugarcane in different periods of history, which we are unable to specify, or at least infer, for want of means to ascertain. Problems of textual, critical, and linguistic nature form an independent subject for investigation. Though attempts have been made in this direction, the vast material available in Sanskrit is yet to be primarily sorted out for examination. Unless the researcher has a good knowledge of the structure of the Sanskrit language and learning, such scientific projects of serious contention are hard to get through. Team work is necessary.

So far as this text is concerned, I hope the translated text in English is more than tentative. Despite a few difficulties in getting at the purport, I take it that the text as we have it is mostly free from doubts. Sanskritists are invited to come forward for collaboration in further studies. Finally, I again offer my profuse thanks to all those who have actively participated in this venture, and to AAHF authorities for undertaking such useful work of academic nature with so much vigor and tenacity.

**S M Ayachit**
Pune, India
7 January 2002

# काश्यपीयकृषिसूक्तिः

# — विषय-सुचि —



1 ई   2 ण   3 पू

काश्यपमुनिकथिता

# काक्यपीयकृषिसूक्तिः [1]

धान्यादिकृषिक्रमकथन

शाकादिकृषिक्रमकथन

भोज्याभोज्यक्रमकथन

विविध हव्य निवेदन क्रमकथनात्मक

भाग चतुष्क गुंभिता

( मूलमात्रम् )

## १. तत्र शाखोपदेशक्रमः -

काश्यपउपदिशति -

धर्मवित् क्षत्रियो राजा प्रजारक्षा धुरं धरः । दण्डयित्वाथ दण्डयांस्तु सत्यं धर्मं च सर्वतः ॥१॥

स्थापयित्वा विशेषेण वर्णाश्रमरतानपि । प्रजाः सुप्तकृतिः काले पोषयेत् देवतुष्टये ॥२॥

देवाश्च यक्षगन्धवोः पितरो मुनयश्च ये । ये चान्ये मखहोमादिक्रियाहोः संप्रकीर्तिता ॥३॥ [2,3]

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1 श्य    2 र्वा    3 र्हा

तत्प्रीणनं तु यजनैः देवयज्ञं विदुर्बुधाः । प्रजानामतिथीनां च प्रीणन् भोजनादिभिः ॥४॥ 1

धेन्वादिप्रीणनं काल्यं भूतयज्ञं प्रकीर्तितम् । ऋषियज्ञादयो ये च निर्दिष्टा मुनिभिः क्रमात् ॥५॥

वेदविद्या दानजपादानैस्तत्प्रीणनं मतम् । अतो यज्ञेषु सर्वेषु देवयज्ञः प्रधानकः ॥६॥ 2

द्वितीयो भूतयज्ञस्तु तन्निदानं मत् मम । तस्मात्सर्वेषु देशेषु भूमीशो रक्षणव्रती ॥७॥ 3

देवयज्ञं भूतयज्ञं द्वयमेव प्रपालयेत् । शुद्धद्रव्यैर्देवयज्ञः सफलः कथितो बुधैः ॥८॥

तदर्हद्रव्यमाद्यं तु सस्यादिः परिकीर्तितः । सस्योदयफला भूमिः घृता वाराहरूपिणा ॥९॥ 4

विष्णुना भूष्णुना पूर्वं पातालजलपाततः । संप्रार्थितस्तया देव्या देवः शार्ङ्गी परः पुमान् ॥१०॥ 10

हर्षेण भूम्या माहात्म्यवदत्सुरसन्निधौ । रत्नादिधारणात् गर्भे रत्नगर्भा वसुंधरा ॥११॥ 5

धान्यादीनामोषधीनां जलाना प्रस्त्रवादपि । धरा तु मेदिनो ख्याता प्राणिनां प्राणवर्धिनी ॥१२॥ 6,7

द्विपदा ये चतुष्पादाश्चाण्डजा विविधास्तु ये । ते सर्वे प्राणिवर्गास्तु मेदिन्याः सारवैभवात् ॥१३॥

प्राप्तसत्वाः प्राणधराः जीविनो निश्चिता भुवि । पन्नगानां तथान्येषां द्विपदां च चतुष्पदाम् ॥१४॥

भरणात् प्राणदानाच्च देवप्रीतिश्च शाश्वती । सत्य धर्म-चरणकं चतुर्वर्ग फलात्मकम् ॥१५॥

ततः सृष्टिस्तु सफला तेन मोदति सृष्टिकृत् ॥ अतः सस्यं धरा प्राणाः धराया वृत्तिरुत्तमा ॥१६॥ 8

माङ्गल्यसूत्रं च तथा सस्यमाहुर्दिवौकसः । सस्यादिरेव मेदिन्याः जीवनाडी कलात्मिका ॥१७॥

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1 नं  2 त्प्री  3 तं  4 धृ  5 त्म्यमव  6 नां  7 नी  8 त्

सस्यादिरेव मेदिन्याः परोधर्मः परं यशः । सस्यपूर्णा वसुमती प्राणिनां प्राणवर्धिनी ॥१८॥
सर्वमङ्गलदात्री च देवानां तुष्टिदायिनी । नित्यसस्या च मधुरजलस्रावा विशेषतः ॥१९॥
शोभते सर्वतः पृथ्वी विष्णोराज्ञावलम्बिनी । विष्णुना पालिता भूमिः जननी प्राणसन्ततेः ॥२०॥
पोषयित्री चाद्यमाता पुष्टिदा तुष्टिदा तथा । रत्नगर्भा परं नित्यं सर्वरक्षणकारिणी ॥२१॥ ॥21॥
पर्वतोत्तुङ्गवक्षोजा पयोधिरशना तथा । समुद्रमुक्ताभूषाढ्या देवी राजति शार्ङ्गिणः ॥२२॥
सुर्यचन्द्रग्निदीपेयं मन्दमारुतवीजना । विशालवनसंचारा पृथिवी विष्णुवल्लभा ॥२३॥ 1, 2
सर्वंसहा राजतेऽत्र दिक्चक्ररचितस्थितिः । तामेतां वसुधां कृत्स्नां कृषियोग्यस्थलो-
ज्ज्वलाम् ॥२४॥
नानादेशेषु विभजेत् नानाकारां महीपतिः ॥

२. गिरिनदीनदवनसार क्षेत्रादिभेदेन सस्यार्हभूमिविभजनक्रमकथनम्

काव्यप उपदिशति - 3

पयोधिसंवृता भूमिरियमासृष्टिस्सर्वतः । ब्रह्मणा तु विधात्रासा निर्मिता हि समस्थला ॥२५॥
फलप्रदात्री विविधा कल्पेषु विविधेष्वपि । श्लाघिता देवगन्धर्वमुनिभूपालवृन्दकैः ॥२६॥
प्राप्तसत्त्वफला भूमिः प्रतिकल्पं च भाविता । क्वचिन्निमग्ना वाराशिजलपूरेषु भूरियम् ॥२७॥

1 सू 2 न्द्रा 3 श्य

क्वचित् तथा समुद्रेण व्यक्तस्वान्तप्रदेशका। क्वचिन्निर्भिष्णुनाडीच कालभेदेन कल्पतः ॥२८॥ 1
सारासारस्रवयुता निम्ना चोन्नतरूपिणी। गिरिभिः संविभक्ताच नदीभिश्च क्वचित्स्थले ॥२९॥
नदेन सारभूम्या च हृदेन महतापि च। क्वचित् शर्कररूपा च क्वचिदत्युष्णरूपिणी ॥३०॥ 30 2
क्वचित् जलविहीना च जातेयं वसुधा क्रमात्। क्वचिदूषररूपा च क्वचित् बीजविनाशिनी ॥३१॥ 3
एवं बहुविधा जाता मेदिनीयं प्रकीर्तिता। अतो महीपतिः सर्वप्राणिपालन दीक्षितः ॥३२॥
सस्याभिवृद्धये भूमिं परिक्षेत सुलक्षणाम्। अस्थिपाषाणखण्डाद्यैः हीनां मृदुलमृत्तिकाम् ॥३३॥ 4,5
सुस्निग्धामल्परक्तां च कृष्णवर्णां तथैव च। तुषकाचविहीनां च सारां रससमुज्ज्वलाम् ॥३४॥
न श्वभ्रयुक्तां नागाधां नोत्तुङ्गां च समस्थलाम्। मल्लिकाजातिकुटजसुगन्धसमुज्ज्वलाम् ॥३५॥
अथवा पद्मखर्जूरतिनिशप्रसवक्रमाम्। अपीतसलिलां शश्वत् पीतोदकजलामपि ॥३६॥
बीजवृद्धिकरीं वेगात् सीतासौख्यप्रदायिनीम्। वृषफेनाक्तकां वापि सत्वजन्तुसमन्विताम् ॥३७॥
अकण्टकां करीषादिहीनां च निविडां घनाम्। तोलनेऽधिक भाराढ्यामोषधीवृद्धिदामपि ॥३८॥
ब्राह्मणक्ष्मां क्षत्रभूमिं वैश्यभूमिं तथैव च। शूद्रभूमिं क्वचिद्देशे संकीर्ण गुण भूमि काम् ॥३९॥
एवं पञ्चविधां जात्या विभक्तां विमलोटकाम्। अन्तःसारयुतां बाह्यसारामपि चकल्पकीम् ॥४०॥ 40
नयनानन्दजननीं वल्मीकादिविवर्जिताम्। दुष्टसत्वविहीनां च सत्वपाक्षिनिवेशिनीम् ॥४१॥
वातवेगेन्त वात्या वा वह्निवेगेन वा पुनः। अपीतसलिलामन्तर्निष्कुटोद्यानवृद्धिदाम् ॥४२॥ 6

1 क्ष्म 2 ह्र 3 त् 4 स्या 5 री 6 न

प्रच्छायभूरुहां वृद्धिदायिनीं मल्पनिम्नकाम् । नाना बीजावली वृद्धि कुरिणीं च मुहुर्मुहुः ॥४३॥ 1

मृदुस्पर्शां च नितरां गोप्रियां गोधनप्रियाम् । शुभलक्षणसंयुक्तामल्पदोषामपि क्वचित् ॥४४॥

सुलभोदकनिस्त्रावां सुलभस्वीकृतोदकाम् । एवं लक्षणसंयुक्तरवल भूमिवृतां क्वचित् ॥४५॥

वसुधां भूपतिर्वीक्ष्य गृह्णीयादुत्तमामिह । भूपरीक्षाक्रमविदो गुणाढ्या नृपचोदिताः ॥४६॥

ब्राह्मणाः क्षत्रिया वापि विशः शूद्रास्तु वा पुनः । दगार्गलप्रमाणज्ञाः कृषिशास्त्रविशारदाः ॥४७॥

परिक्षयेयुः भूमिं तु शुभे शुभनिमित्तके । स्नातः शुचिः शुद्धवासाः धृतस्वणोड्डुलेपकः ॥४८॥ 2 3

निर्दिष्टां भूमिमासाद्य कुर्यात् तत्र प्रदक्षिणम् । सह मङ्गलघोषेषु स्वस्तिवाकोन कोविदः ॥४९॥ 4 a

सायंकालेऽथवा प्रातः ब्राह्मणैर्वेदपारगैः । पञ्चगव्येन शुद्धेन सलिलेनाथवा पुनः ॥५०॥ 50

खनित्रेणापि तुलया टंकयापि क्वचित् बुधः । भूमिं परिक्षयेत् खात्वा निरीक्ष्य च मुहुर्मुहुः ॥५१॥ 5

आघ्राय पीत्वा च मृदं तोलयित्वापि वा क्वचित् । क्षिप्त्वा पात्रस्थसलिले घटिकावधि कोविदः ॥५२॥

वर्णबिन्दुरसस्रावैः विद्यात् भूम्याश्च लक्षणम् । समवर्णा समच्छाया घना स्निग्धा च भूरपि ॥५३॥

देवानामपि भूपानां प्रशस्ता मुनिनिश्चिता । ब्राह्मणानां विशां चापि क्षेमदा वृद्धिदायिनी ॥५४॥

शुभलक्षणसंयुक्ता सर्वेषां शुभदा धरा । कुटुम्बारोग्यदा शश्वत् धनगोधान्यवृद्धिदा ॥५५॥

निर्दिशेदुत्तमां भूमिं मध्यमामपि वा क्वचित् ॥ अधमां वर्जयेत् यत्नात् भूमिलक्षणपण्डितः ॥५६॥

कृषियोग्या भूमिरियमुद्यानायेयमादृता । वनाय भूरियं प्रोक्ता जलाधाराय निश्चिता ॥५७॥

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1 का    2 री    3 र्णा    4 ण    5 री    a क्ये

इयं भूमिरिति प्रोक्ता चतुर्थी च स्वभावतः । इति भूमिं शुभे काले निर्दिशेच्च नृपाज्ञया ॥५८॥

सीमास्थलविभागश्च कर्तव्यो भूमिमिच्छता । ग्रामेष्वपि च देशेषु दुर्गेषु नगरेष्वपि ॥५९॥

प्रासादान्तस्तु वा भूमिं कृष्युद्यानादियोग्यकाम् । निर्दिशेन्मतिमान् युक्त्या नानाक्षेत्रस्वरूपवित् [1]

॥६०॥ ॥60॥

जलस्वरूपवित् प्राज्ञः प्राणिनां सुखसिद्धये । [2]

## ३. भूम्यां जलाधारस्थापनक्रमकथनम् ॥

काश्यप उपदिशति -

प्रमाणज्ञैः शिल्पिवर्यैः शास्त्रपारंगतैर्नृपः । कारयेत् ग्रामनिर्माणं दुर्गाणां च पुरामपि ॥६१॥

वनमध्ये नदीतीरे गिरिसानुतटेऽथवा । स्वदेशेष्वपि राष्ट्रेषु तत्रतत्र विशेषतः ॥६२॥

आभीरपल्लीं घोषं च व्रजं वा गोधनाश्रितम् । तथा क्षुद्रग्रामजालं स्थापयेत् सुमुहूर्तके ॥६३॥

वापीकूपसमायुक्तमुद्यानादिविभूषितम् । सस्यक्षेत्रावृतं कार्यं नियमेन महीपतिः ॥६४॥

ग्रामाणां नगराणां च पुराणामपि सारभूः । सस्याहा कथिता प्राणः जीवनं चोत्तमं तथा ॥६५॥

प्राणनाडीति गार्ग्यश्च प्रोवाच वदतां वरः । सस्याहक्षेत्रसंयोगादेव सर्वत्र शाश्वतम् ॥६६॥

ग्रामादिनिर्माणफलं कथितं मुनिपुङ्गवैः । प्राणिरक्षा च नितरां पुरुषार्थफलं तथा ॥६७॥

1 रू 2 रू

देवतुष्टिर्यज्ञफलं सृष्टेश्च फलमुत्तमम्। सजीवस्य हि लोकस्य प्राणरक्षाकरी भृशम् ॥६८॥

सारभूरिति निर्दिष्टा जीवानां फलमुत्तमम्। अतः सुलक्षणोपेतां दोषहीना महीपतिः ॥६९॥ 1

अथवा स्वल्पदोषां तु निर्दिशेत् तत्रतत्र तु। विभक्तां ग्राममार्गेण पुरमार्गेण वा क्वचित् ॥७०॥ ॥70॥

महामार्गेण वा देशे विभजेद्भूमिमुत्तमाम्। ग्रामाणां नगराणां च पश्चिमे भाग उत्तमे ॥७१॥

उदीच्यामथवा प्राच्यां दक्षिणस्यां तथा क्वचित्। जलाशयं स्थापयेत्तु भूमिस्थित्यनुसारतः ॥७२॥

गभीरं परिघाक्त्तु धनुराकारभासुरम्। दीर्घं क्वचित् वर्तुलं वागाधं तु सलिलाशयम् ॥७३॥ 2, 3, 4

दृढप्रणालिकासेतुमार्गेण च सुरक्षितम्। उत्तुङ्ग तटकल्पाढ्यमथो मार्गेण संयुतम् ॥७४॥

जलागमनमार्गेण शोभितं च विशेषतः। अतो गिरेः समीपे वा चोत्तुङ्गे भूतलेऽथवा ॥७५॥

महाहृदेन संयुक्ते स्थापयेत्तु जलाशयम्। महाजलस्थैर्यभाजं जलाधारे तु भूतले ॥७६॥ 5, 6

सारक्षेत्रे स्थापयेत्तु स्वयं स्त्रावयुतेऽपि वा। सैकतादिविहीने तु पाषाणादिविवर्जिते ॥७७॥

जलाशयं तु गंभीरं जलपूरार्गलायुतम्। तथा तं स्थापयेद्विद्वान् जलपूर्णे जलाशये ॥७८॥ 7

येन वा न विरोधः स्यात् ग्रामादेर्नगरस्य च। प्राकारोद्यानदुर्गाणां खलक्षेत्रस्य वा पुनः ॥७९॥

जलभीतिः प्रवाहाद्यैः न स्यात्सर्वत्र भूमिपः। तथा तं स्थापयेत् देशे परिक्षेत क्रमादिमम् ॥८०॥ ॥80॥ 8

मासक्रमेण वा वर्षक्रमेण च मुहुर्मुहुः। स्थापयेन्नृपतिस्तत्र तटरक्षणकारिणः ॥८१॥

वर्षाकाले विशेषेण कुल्यादीनां शतं तथा। वापीनां दीर्घिकाणां च रक्षाणं क्षेमदं मतम् ॥८२॥

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1 नां 2 यु 3 क्तं 4 धं 5 ह्र 6 रं 7 न् 8 री

जलाशये तु सलिलपूर्णे संरक्षिते क्रमात् । सस्यादिवृद्धिस्तत्रैव निश्चितः सुखदायकः ॥८३॥ 1, 2

रोगहानिर्वह्निभयहानिश्च सुखमुत्तमम् । पोषणं रक्षणं शस्तं द्विपदां च चतुष्पदाम् ॥८४॥

विहंगमानामपि च सर्पादीनां च सर्वतः । सुखं तु परमं चोक्तं न व्याधिश्च भवेत् ध्रुवम् ॥८५॥

पानद्रव्यं तु सलिलं द्विपदां च चतुष्पदाम् । विहङ्गमानामपि च सर्पादीनां च सर्वतः ॥ ८६॥

सुखं तु परमं चोक्तं न व्याधिश्च भवेद् ध्रुवम् । पानद्रव्यं तु सलिलं द्विपदां च चतुष्पदाम् ॥८७॥

एकमेव हि निर्दिष्ट ब्रम्हणा सृजता प्रजाः । महोदकस्थानमेषः जलाशय उदीरितः ॥८८॥ 3

अतः सर्वप्रयत्नेन प्रजारक्षाधुरंधरः । स्थापयेत् रक्षयेद्राजा जलाशयमिमं क्रमात् ॥८९॥

जलाशयद्वयं भूपः क्वचिदेकं जलाशयम् । सारक्षेत्रानुसरणं स्थापयेत् ग्रामयोग्यकम् ॥९०॥

गिरिप्रस्रवणोपेतं महाहृदयुतं तथा । वननिम्नगया युक्त महानिम्नगया क्वचित् ॥९१॥ ॥91॥ 4

देशेदेशे विशेषेण ग्रामाणां च पुरामपि । जलव्ययस्थानयुतं कल्पयेत् युक्तितः क्रमात् ॥९२॥

जलाशयतटे भूपः वृक्षांश्च परिवर्धयेत् । वेतसं च वटं तत्र कोलकन्दावलिं क्वचित् ॥९३॥

प्लक्षमश्वत्थकं चैव खदिरं खादिरं तथा । तिन्दुकं तिन्त्रिणीं वापि भूर्जरं चापि वेणुकम् ॥९४॥

निम्बं कदम्बमपि च ये च सारद्रुमा मताः । तांस्तु वृक्षान् महीपालः यत्नेनाहृत्य कालतः ॥९५॥

जलाशयतटे युक्त्या स्थापयेत् क्षेमसिद्धये । तटस्य निम्नभूम्यां वा तत्कुल्यायाश्च निर्गमे ॥९६॥

स्नानघट्टाविरोधेन पानघट्टार्हकं क्वचित् । वृक्षांश्च वर्धयेत् युक्त्या तत्रतत्र विशेषतः ॥९७॥

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1 ता 2 का 3 ष्टं 4 ‍-ह

खलभूम्यां तथा वृक्षान् वह्वादीन् सुखदायिनः । तटाकदीर्घिकातीरे ह्रदादीनां तटे तथा ॥९८॥ 1

प्रच्छाय वृक्षान् भूपालः वर्धयेत् क्रमतस्तथा । आक्रीडेष्वपि चोद्यानेष्वेवं विश्रांतिभूमिके ॥९९॥ 2

महामार्गस्थले तत्र जलाशयसमीपतः । वातप्रोतप्रसवकान् प्राणिनां श्रमहारिणः ॥१००॥ ॥100॥

वनभोजनयोग्येषु स्थानेषु विविधेष्वपि । देवालयोद्यानतले भूपालोद्यानके तथा ॥१०१॥

मुनीनामुटजानां च तले तत्र विशेषतः । सेनानिवेशस्थाने च भूपविश्रान्तिकस्थले ॥१०२॥

यज्ञार्हस्थलके चापि बल्यर्हस्थानकेऽपिच । प्रच्छाय वृक्षान् भूपालः वर्धयेत् क्रमशस्तथा ॥१०३॥ 3

विहङ्गमाल्हादकरान् फलपुष्पादिदायिनः । तथा व्याधिप्रशमकान् शीतलान् कोमलान् तरून् ॥१०४॥ 4

अकण्टकांश्च पनसानाम्रांश्चापि रसालकान् । पुन्नागमालतीकुन्दचम्पकावलिमप्यथ ॥१०५॥

स्थापयेदावरणके तत्रतत्र विशेषतः । जलाशयजलस्रावात् वर्धयेच्च क्रमात्तरुन ॥१०६॥ 5

जलाशयविहीने तु सुखं नैवोपजायते । न सान्ध्यकर्म न स्नानं वृक्षाणामपि वर्धनम् ॥१०७॥

न स्यादित्येव मुनिभिः सौख्यं त्विति विनिश्चितम् । अतः सर्वप्रयत्नेन भूपालो रक्षणव्रती ॥१०८॥

ग्रामेष्वपिच देशेषु वनमध्ये तु वा पुनः । स्थापयित्वा तु गम्भीरं जलाशयमतंद्रितः ॥१०९॥

कुल्यां दृढतरां नित्यं सुलभोदकनिःस्रवाम् । नानाशाखासमाक्रान्तां महाकुल्यायुतां तथा ॥११०॥ ॥110॥

जलाशयेन सहितां स्थापयेत् बहुशो दृढाम् ।

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1 ह्र  2 यवृ  3 यवृ  4 रू  5 रू

४. अथ नदीमातृककुल्याकूपादिक्रमकथनम् ॥

काश्यप उपदिशति-

यत्र सस्याक्षितेः कुल्या जलधारोऽपि वा क्वचित् । न कल्पिता वा न स्थाप्या सततोदकपूरिता ॥१११॥

तत्र कुल्या नदीमातृमुखा स्थाप्येति निश्चिता । तच्चतुर्विधमाख्यातं कृषिपद्धतिकोविदैः ॥११२॥

आद्या नदीमातृका स्यात् कुल्या चाथ हृदाश्रिता । जलाशयाश्रिता वापि महीध्रभृगुपार्श्वभाक् ॥११३॥ 1 2

कुल्या चतुर्विद्या ह्येवं स्थाप्या देशप्रमाणतः । यत्रोर्ध्वभागे नद्यादिः दृश्यते भूस्वभावतः ॥११४॥ 3

तत्र नद्या मुखं कार्यं स्वतः प्रस्राव भासुरम् । कृषियोग्यं स्थलं यत्र विद्यते देश भुमिषु ॥११५॥ 4

प्रायस्तदूर्ध्वके भागे दूरे वा दूरतोऽपि वा । कुल्या धारः प्रकर्तव्यः कृषिकार्यविचक्षणैः ॥११६॥

प्राक्गामिन्यां निम्नगायां कुल्यारम्भं क्वचित्स्थले । तथा पश्चिमगामिन्यां कुल्यां संपरिकल्पयेत् ॥११७॥

हरिदन्तरगामिन्यामथवा तां प्रकल्पयेत् । कोणान्तर प्रवेशिन्यामापगायामपि क्वचित् ॥११८॥

क्रमणोत्तुङ्ग भूमिस्तु सर्वत्र हि विशिष्यते । निम्नगा मातृका कुल्या नद्यारब्धा कृतस्थला ॥११९॥

क्रमेण भूमिं विविधामाक्रम्य बहुरुपिकाम् । ग्रामात् ग्राममथाक्रम्य वनादूनतलं तथा ॥१२०॥ ॥१२०॥ 5

स्वकीयक्षेत्रगां कुर्यात् प्रकृतिक्षेमसिद्धये । चतुर्हस्तः पन्चहस्तः षट्हस्तः सप्तहस्तकः ॥१२१॥ 6

दशहस्तकमानं वा कुल्यावैपुल्यमीरितम् । क्वचिन्महाहृदारब्धा कुल्या सा जलपूरिता ॥१२२॥ 7

तथा महोदकनदीतलारब्धा च निश्चिता । स्वक्षेत्रभागावधिकं कुल्यावैशाल्यमुत्तमम् ॥१२३॥

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तुल्यमेवं हि कल्प्यं तदुन्नतिस्तु स्थलोचिता । सर्वत्रागाधता योज्या जलप्रस्त्रावयोग्यका ॥१२४॥

महातटाकं तीर्वा वा मध्यमार्गे क्वचित् तले । सर्वप्राणिहितार्थैतां कुल्यां भूपः प्रकल्पयेत् ॥१२५॥

गिरिप्रस्त्रवणारब्धां कुल्यामपि तले क्वचित् । स्वक्षेत्रगामिनीं कुर्यात् कृषिसंपद्विवृद्धये ॥१२६॥

कुल्यामेकां पूर्णजलां तथा कुल्याद्वयं क्वचित् । कुल्यात्रयं वा क्षेत्राणां हिताय हि विधीयते ॥१२७॥

नदीहीने क्वचित् देशे सैकतस्थल कल्पिता । कुल्यापि च सुखार्थैषा निश्चिता कृषिकोविदैः ॥१२८॥

संततस्त्रावसंयुक्ता स्थली सा ग्राववर्जिता । सुक्षेत्रा सुगुणोपेता सस्यक्षेमाय कल्पते ॥१२९॥

हृदारब्धां तु वा कुल्यां नेयात्स्वग्रामसंपदे । उद्यानायापि वा देशे चाक्रीडायापि वा क्वचित् ॥१३०॥ ॥130॥ 1

कुल्याप्रकल्पनं युक्त्या जलस्त्रावसमुज्ज्वलम् । स्नानाय पानाय तथा कृषिकार्याय च क्षितौ ॥१३१॥

निश्चितं मुनिभिः पूर्ववेदिभिः जीवरक्षकम् । क्वचित् देशे भूतलं तु कुल्यानीरं प्रणाशयेत् ॥१३२॥

पाययेत् शोषयेद्वापि स्वान्तर्दोषिदिभिः स्वयम् । अतस्तत् भूतलं वर्ज्यं कुल्यानिर्माणकोविदैः ॥१३३॥ 2

क्वचिदूषरभूमिश्च दृश्यते सर्वतः क्षितौ । सा चापि वर्ज्या कुल्यार्थै भूदोषाक्रान्तभूरपि ॥१३४॥

अतः सद्गुणसंपन्नं भूतलं वीक्ष्य पार्थिवः । कुल्याप्रकल्पनं देशे स्थापयेत् सस्यसंपदे ॥१३५॥

क्वचित् कुल्याद्वयं योज्यं तथा कुल्यात्र्यं क्वचित् । स्थलानुकूलं सर्वत्र तत्कल्पनमुदीरितम् ॥१३६॥ 3

सर्वासामपि कुल्यानां जलाधारस्थलीषु च । प्रवेशश्च क्रमात्प्योक्तः शास्त्रविद्भिर्मुनीश्वरैः ॥१३७॥ 4

जलाशयविहीने तु स्थले ग्रामे पुरे तथा । वने वनान्तरे वापि तां कुल्यां क्षेत्रगामिनीम् ॥१३८॥

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प्रकल्पयेत् तथा धीमान् सस्यवृध्यै विशेषतः। तले तत्र क्षुद्रकुल्या शस्यते च फलप्रदा ॥१३९॥ 1

प्राणिनामपि सस्याना जीवनं जीवनं मतम्। अतः सर्वत्र देशेषु पार्थिवः क्षेमसिद्धये ॥१४०॥ ॥140॥ 2

कुल्यां नदीमातृकां वा स्थलान्तरकृतामपि। जलपूर्णां प्रकुर्वीत खातयेत् रक्षयेत्सदा ॥१४१॥

अरक्षिता सा विफला दोषभाक् जलवर्जिता। अतो भूपतिभीः सर्वैः कुल्यारक्षणमुत्तमम् ॥१४२॥ 3

धर्म इत्येव निर्दिष्टमृषिभिस्तत्त्वदर्शिभिः। वाषीभ्यश्च तटाकेभ्यः कूपेभ्यश्च विशेषतः ॥१४३॥ 4

जलपोषणमादिष्टं कृषिक्षेमाय भूतले। क्वचित्त स्थल्यामूर्ध्वभागे निश्चिता सलिलस्थितीः ॥१४४॥ 5, 6

क्वचित्तु कथिता भूम्यामधोभागे जलस्थितीः। क्वचित्पाषाणमूयिष्ठे जलस्रावस्तु नश्यति ॥१४५॥ 7, 8

मृद्दोषदूषितेऽन्यत्र जलस्रावश्च नश्यति। अतः सैकतभूयिष्ठा जलपूर्णा वसुंधरा ॥१४६॥

वापीकूपादियोग्येति निश्चिता तत्त्वदर्शिभिः। यस्मिन् देशे ग्रीष्मकाले सस्यक्षेत्राय वा पुनः ॥१४७॥

उद्यानायापि वा नीरं न पर्याप्तं हि कुल्यजम्। तस्मिंस्तु देशे सर्वत्र कूपं निर्मापयेन्नृपः ॥१४८॥

क्षुद्रकूपं च कूपं च महाकूपं च वापिकाम्। चतुरश्रं मण्डलं वा दीर्घाकारमथापि वा ॥१४९॥

स्थापयेत् खातयेत्तच्च रक्षयेच्च यथाविधि। उत्तरायणमासेषु प्रायो देशेषु सर्वतः ॥१५०॥ ॥150॥

अधोभागे जलं दृश्यं नद्यामापि तले क्वचित्। तस्मात् कूपादिखननमुत्तरायणमासिके ॥१५१॥

संपूर्णसलिलावाप्तिहेतवे चिरकालिकम्। दगार्गलविधिज्ञेन धीमता भूमिवल्लभः ॥१५२॥

कापीकूपादिखननं सलिलस्थितिमेव च। आदौ निश्चित्य वृक्षाद्यैः भूनाडीवीक्षणादपि ॥१५३॥ 9

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1 ध्यै 2 नां 3 भिः 4 पी 5 त् 6 तिः 7 तिः 8 भू 9 वा

भूमिं परिक्ष्य कलयेत् सुमुहूर्ते सुलग्नके। प्रायः प्रातस्तु खननं शुभाय परिकीर्त्यते ॥१५४॥ 1

अभ्यर्च्य वरुणं नीरनाथं भूदेविकामपि। वनदेवीं तथाभ्यर्च्य बलिदानात् विशेषतः ॥१५५॥ 2

कूपं वापीं दीर्घिकां च स्थापयेत् क्रमतो नृपः। आदौ महावटं खात्वा दीर्घं वा चतुरश्रकम् ॥१५६॥

मण्डलाकारमथवा खातमृत्स्नां तु दूरतः। निक्षिप्य क्रमशस्तत्र जलसंदर्शनावधि ॥१५७॥

मृदुद्धरणमाख्यातं भटैर्वीरैः कृषिवलैः। जलं सैकतसंमिश्रं वीक्ष्य कूपादिषु क्रमात् ॥१५८॥ 3

अधोऽधिष्ठानकल्पस्तु दार्ढ्याय च विधीयते। स्थले सैकतं भूयिष्ठे चेष्टिकाजालकैरपि ॥१५९॥ 4

सुपक्वैरिह चादिष्टमधिष्ठानप्रकल्पनम्। कठिने भूमिभागे तु दीर्घिकाकल्पने क्वचित् ॥१६०॥ ॥160॥

अधिष्ठानमधोभागे शिलाखण्डैः प्रकल्पयेत्। कूपस्याधःस्थले चैवमधिष्ठानं यथाक्रमम् ॥१६१॥

सिकताजलसंमिश्रमृदुद्धरणकार्यतः। दृढीकृत्य क्रमान्नित्यं भूयिष्ठं सलिलं ततः ॥१६२॥

विलोक्य तत्र कूपादावधिष्ठानोपरि क्रमात्। इष्टिकाखण्डकैः काले निर्माणं कल्पयेन्नृपः ॥१६३॥

सुधासंमिश्रितैः कूपनिर्माणं त्विष्टिकादिभिः। चिरकालस्थितिकर माहुस्तत्त्वविदो बुधाः ॥१६४॥

अतः सर्वत्र देशेषु वापीकूपादिकल्पनम्। सुधेष्टिकादिभिः कार्यमिति शास्त्रेषु निश्चितम् ॥१६५॥

अधिष्ठानात् भूतलान्तं प्रत्यहं चेष्टिकादिभिः। प्रकल्पनं प्रकुर्वीत क्वचित् सोपानकल्पनम् ॥१६६॥

मुखद्वारं प्रकुर्वीत शिलाभिः भूतले क्रमात्। प्राच्यां प्रतीच्यामथवा स्थलयोग्यं विदुर्बुधाः ॥१६७॥

घटीयन्त्रस्थलं तीरे शिलिभिः परिकल्पयेत्। ततः सलिलनिःस्रावहेतवे दृढभूमिके ॥१६८॥ 5

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तीरेषु क्षुद्रकुल्यां च स्थापयेत् स्थलयोग्यकम् । घटीयन्त्रं तु विविधं वृषभैर्वाह्यमुत्तमम् ।।१६९।।

दृढशृंखलिकायोगात् हस्तिहस्तादिभिः कुचिता वाह्यं तु तन्मध्यमं स्यादधमं नरवाह्यकम् ।।१७०।। 170

घटीयन्त्रप्रेरणेन चाधःस्थं सलिलं क्रमात् । कूपादितीरभाक् लोके दृष्टं सर्वत्र सर्वतः ।।१७१।।

तन्नीरं कुल्यकायोगात् सस्यक्षेत्राय शस्यते । कृषिकार्यरतास्तस्मात् धीमन्तः पुरुषा भुवि ।।१७२।।

ब्राम्हणाः क्षत्रिया वैश्याः शूद्राश्चान्येऽपि युक्तितः । घटीयन्त्रप्रयोगेन वापीकूपादिनीरकम् ।।१७३।।

जलाशयस्थं नीरं वा नदीमातृककुल्यगम् । ह्रदोत्थं च जलं शुद्धं जलदोषविवर्जितम् ।।१७४।।

कृषिक्षेत्राय शाकादिस्थानकाय च भूतले । चंपकादिलतास्थल्यामपि नीत्वा यथाक्रमम् ।।१७५।।

कृषिप्रयोजनं लोके प्राप्नुवन्ति यथाविधि । जलाधारस्थलं तस्मादादौ प्राप्य कृषीवलैः ।।१७६।।

कुल्याद्यैरपि कूपाद्यैः ह्रदाद्यैरपि भूतले । जलाशयाद्यैरपि च जलं प्राप्यं हि निश्चितम् ।।१७७।। [1]

मेघप्रचारकाले तु वृष्टिः सर्वत्र निश्चिता । दैवयोगान्मुनीन्द्राणां संकल्पादपि सर्वथा ।।१७८।।

कादम्बिनीभिः काले तु संवृष्टं सलिलं नृपः । जलाशयादिस्थानेषु पूरयेत् क्षेमसिद्धये ।।१७९।।

रक्षयेत् तत्प्रयत्नेन जलमूला कृषिर्मता । अतः सर्वत्र भूपालैरन्यैः पुरुषपुंगवैः ।।१८०।। ।।180।। [2]

ऋतुकाले तु सर्वत्र जलं प्राप्यं प्रयत्नतः । संरक्ष्यमिति च प्रोक्तं काश्यपेन महर्षिणा ।।१८१।।

1 द्यै 2 त्प्र

५. कृषिवालानां ग्रामकार्यकराणां च गुणलक्षणकथनम्। कृषिप्रशंसाच ॥ 1 2 3

काश्यप उपदिशति - 4

कृषिकार्यरता ये तु पुरुषाः ग्रामवासिनः ।दंभासूयादि मुक्ताश्च परस्परहितैषिणः ॥१८२॥ 5

गोभूमीदेवभक्ताश्च नितरां सत्यवादिनः ।परानुकूल्यनिरताः सन्ततं तुष्टचेतसः ॥१८३॥ 6

अजातशत्रवो लोके परकार्यप्रयोजनाः । चतुष्पाद्दुर्गवात्सल्यभूषिता नयकोविदाः ॥१८४॥

गणनाकर्मकुशलाः शुद्दाः शौचपरायणाः ।नित्यकर्मरताः काले कृतातिथिसुक्रियाः॥१८५॥ 7

तंन्द्रालस्यादिहीनाश्च कामक्रोधादिवर्जिताः ।परस्परं स्नेहभाजः साहयकर्मरताश्च ये ॥१८६॥ 8

ते तूत्तमाः समादिष्टाः पुरुषाः पुण्यदर्शनाः ।जलाशयतटादीनां कुल्यादीनां च रक्षकाः ॥१८७॥

गोरक्षणैकनिरताः राजविश्वासशालिनः । पुत्रपौत्रादिसंपन्नाः श्वशुरभ्रातृवर्गकाः ॥१८८॥

ब्राम्हणाः क्षत्रियावैश्याः शुद्राश्च कृषिजीविनः । संकीर्णवर्णजा ये तु व्याधाद्या ये नरा भुवि ॥१८९॥

आखेटरसिका ये तु ये च गोरक्षका मताः ।ये त्वजापालकाः ख्याताः ये चान्ये कृषिजीविनः ॥१९०॥ ॥190॥

ते सर्वे मनुजा लोके सर्वदेशेषु सर्वथा ।परस्परप्रीतियुक्ताः लोकक्षेमाय दीक्षिताः ॥१९१॥

ग्रामाग्रगण्यैः जात्यग्रगण्यैरेवं नृपाज्ञया ।शिक्ष्यस्स्ववृत्तयो लोकवार्ताभीताः कृपालवः॥१९२॥ 9

स्वस्वजीवनरक्षाख्यमखेषु कृतदीक्षकाः ।सर्वप्राणिहितायैते कथिताः पुण्यपुरुषाः ॥१९३॥ 10

तेषु ये ब्राम्हणाः शुद्दाः सत्यधर्मपरायणाः ।कृपालवो नीतिविदः पश्चात्तापादिभूषणाः ॥१९४॥

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1 षी 2 व 3 गु 4 प 5 दं 6 मि 7 सु स(?) 8 त 9 क्ष्या: 10 पू

यथार्हदण्डकाः सर्वरक्षाकर्मणि दीक्षिताः। नृपालाज्ञापालनोत्काः बहुसद्गुणमण्डिताः ॥१९५॥
ग्रामाधिपतयस्ते तु कर्तव्या भूतिमिच्छता।ग्रामस्यैकस्य वा ते तु ग्रामाणां वा क्वचित् स्थले॥१९६॥
न्यायान्याय्यक्रमस्थैर्यधर्मस्थापनकारिणः। ते वै कृषिक्रियासाहयकारिणः संप्रकीर्तिताः॥१९७॥
भूपालैः क्षत्रियैरेवं धनिकैर्वैश्यकैरपि। कृषिकार्येषु तैः साह्यं कार्यं लोकहिताय हि॥१९८॥
धर्म्यं यशस्यमायुष्यं कृषिसाह्यमितीरितम्। भूपालैः क्षत्रियैस्तस्मात् ब्राम्हणैः वैश्यकैरपि॥१९९॥
शुद्रैरपि यथाशक्ति कृषिसाहयं महाफलम्। नानाविधानां बीजानां गवामपि च दानतः॥२००॥ ॥200॥
क्षेत्रदानान्महापुण्यमाहुर्लोके मुनीश्वराः। कुल्याखननतो वापि सस्यक्षेत्रस्य रक्षणात्॥२०१॥
जलाशयस्थापनाद्वा वाप्यादीनां विशेषतः। अन्नशालास्थापनाद्वा कृषिसाहयं महाफलम्॥२०२॥
गवां च संरक्षणतो ब्राम्हणानां विशेषतः। यथाशक्तिक्रियासाह्यं महाफलमुदीरितम्॥२०३॥
तस्मात् सर्वत्र देशेषु पुरुषास्तु कृपालवः। ग्रामरक्षणभृत्यांश्च तटरक्षणभृत्यकान्॥२०४॥
स्थापयित्वा ही सर्वत्र तत्रतत्र विशेषतः। विद्राव्य चोरान् दण्डयांश्च दण्डयित्वा यथाक्रमम्॥२०५॥
धर्मं स्थितिं च परमं सुखं जीवनरक्षणम्। प्रकुर्वन्तस्तु पुरुषाः देवैः श्लाघ्या प्रक्रीर्तिताः॥२०६॥ 1
सत्यं दानं क्षमा शीलमानृशंस्यं तपो घृणा। यस्मिनु संहृश्यते सर्वं नियोक्तव्यः स पूरुषः॥२०७॥ 2 3
ग्रामन्यायसभायां च भूमिपालैर्यु थाक्रमम्। ग्रामाधिपत्यं च तथा कृषियुक्तिप्रवर्तनम्॥२०८॥ 4
तदधीन शुभकरमित्याहुः परमर्षयः। ब्राम्हणणानामलाभे तु क्षत्रियो वैश्य एव वा॥२०९॥ 5, 6,7

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तत्र संयोजनीयःस्यात् प्रजानां क्षेमहेतवे। सर्वत्रार्षं प्रमाणं च क्षेमाय विजयाय च ॥२१०॥ ॥210॥

कृषियुक्तिस्तु लोकेऽस्मिन् कुचित् शूद्रेष्वपि स्थिता। स शूद्रः सद्गुणाढ्यश्च विप्रभक्तिपरायणः॥२११॥ 1

शास्त्रविश्वासशाली च मानज्ञः साधुसेवकः। धीमान् कालप्रमाणज्ञः हितकारी हितप्रियः॥२१२॥

भवितव्यश्च विनयी तद्युक्तिः श्लाघनास्पदम्। प्रायो ग्रामेषु सर्वत्र भृत्या शूद्राः प्रकीर्तिताः॥२१३॥

त एव कृषिकार्येषु योक्तव्या नान्यजातयः। वैश्याश्च क्षत्रियाश्चैव गुणाढ्याः सुक्ष्मबुद्दयः॥२१४॥ 2

गणनादिक्रियास्वेवं रक्षणादिक्रियासु च। नियोक्तव्या भूमिपालैः विप्रा नीतिषु नित्यशः॥२१५॥

गवां रक्षणकार्येषु प्रजारक्षणकर्मणि। चोरादिदण्डकार्येषु जलाधारादिरक्षणे॥२१६॥

देवालयादिरक्षासु कृषिकार्ये विशेषतः। कार्यान्तरेष्वपि ग्राम्येष्वेवं भूपालकर्मणि॥२१७॥

ब्राम्हणाः क्षत्रिया वैश्याः शूद्राश्च दृढबुद्दयः। सर्वे सर्वत्र योक्तव्याः तदा क्षेमाय कल्पते॥२१८॥

तदा जनपदस्यापि राष्ट्रस्य च विशेषतः। सुखादिरैकमत्याच्च जायते परमं सुखम्॥२१९॥

ऐककण्ठ्यं चैकमत्यं पतङ्गेषु च नित्यशः। दृश्यतामिती निर्दिष्टं भार्गवेणेह मौनिना॥२२०॥ ॥220॥ 3

तस्मात् ग्रामे जनपदे पुरे वा दुर्गकल्पने। निवासिनो जनाः सर्वे गतासूयादिदुर्गुणाः॥२२१॥

सेतुसंरक्षणे मार्गरक्षणे कृषिरक्षणे। पुरग्रामादिरक्षासु चाक्रीडोद्यानरक्षणे॥२२२॥

प्रजानां रक्षणे चापि गावामपि च रक्षणे। धर्मरक्षास्वपि तथा न्यायकार्यस्य रक्षणे॥२२३॥ 4

यच्चान्यात् रक्षणं प्रोक्तं नानारुपं महर्षिभिः। सर्वासु तासु रक्षासु सर्वैर्ग्रामादिवासिभिः॥२२४॥

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प्रत्येकमादरः श्रेयान् शस्यते शास्त्रचोदितः । यस्मिन् ग्रामेऽथवा राष्ट्रे राज्ञः सद्म न कल्पितम् ॥२२५॥ [1]

तस्मिन् देशे विशेषेण प्रजानां पालनाय हि । अमात्यो वा राजवंश्यः गुणी प्रतिनिधिस्तु वा ॥२२६॥ [2]

प्रकुर्वीत निवासं तु धनसेनासहायवान् । प्रजाभिः प्रार्थिते दत्वा रक्षेत् ताश्चापदो भृशम् ॥२२७॥

नानाविधैरुपायैस्तु जीवनं परिकल्पयेत् । ब्राम्हणाः क्षत्रिया वैश्याः शूद्राः संकीर्णजातिजाः ॥२२८॥

ये चान्ये मनुजा लोके ग्रामादिस्थलवासिनः । स्वधर्मनिरतास्ते तु सुखभाजो यशस्विनः ॥२२९॥ [3]

संप्राप्तपरमानन्दाः सकुटुम्बाः सगोधनाः । विराजन्ते हि देशेषु तत्रतत्र विशेषतः ॥२३०॥ ॥230॥

नृपाज्ञावर्तिनः सर्वे श्रुतिस्मृतिकृतादराः । परोपकारनिरतास्तथा वीतभया नराः ॥२३१॥

आधिव्याधिविहीनास्ते सत्क्रियाः साधुसेविनः । विराजन्ते हि देशेषु तत्रतत्र विशेषतः ॥२३२॥

सर्वेषामेव तेषां तु कृषिवृत्तिः सनातनी । शुभदा भूतिदा श्लाघ्या यथान्यायप्रवर्तनात् ॥२३३॥

ब्राम्हणाः क्षत्रिया वैश्याः स्वकर्मनिरता अपि । कृषिकर्मसु योग्यास्ते साधुश्लाघ्यं हि तद्विदुः ॥२३४॥

यज्ञानामपि चाधारः प्राणिनां जीवदायकम् । कृषिकर्म प्रशंसन्ति मुनयो दिव्यचक्षुषः ॥२३५॥

नृपात् प्राप्तं स्वतः क्रीत् सस्यक्षेत्रं तु मानवाः । संप्राप्य यत्नवन्तश्च कृषिकार्यकृतादराः ॥२३६॥ [4]

देवानां च मुनीनां च ते मताः प्रीतिदायिनः । धनानामपि सर्वेषां कृषेरेव परं धनम् ॥२३७॥

परैरग्राह्यमादिष्टं सर्वश्लाघ्यं महाफलम् । देवानां प्रीतिजनक शुद्धद्रव्यप्रदायि तत् ॥२३८॥ [5]

पारतन्त्र्यहरं चैव नित्यं लक्ष्मीविलासकृतम् । तथातिथीनां देवानां स्वकुटुम्बस्य जीवदम् ॥२३९॥ [6]

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नानाविधानन्दकरं कृषिकर्म प्रशस्यते । अतस्तदन्या वृत्तिस्तु पारतन्त्र्येण गुम्भिता ॥२४०॥॥240॥
पुण्यांनां ह्यानिदा चापि निंन्दिता तत्त्वदर्शिभिः । अतः सदगुणसंपन्नः पुरुषा स्वप्रयत्नतः ॥२४१॥ 1 2 3
वेदाध्यनसंपन्ना अपि रक्षाप्रवृत्तयः । वाणिज्यवृत्तयश्चान्ये शूद्राः संकीर्णजा अपि ॥२४२॥
सत्यव्रता दयाढ्याश्च कृष्यादानरता भृशम् । संमान्यवृत्तयः कामं साधुभिश्च सुरैरपि ॥२४३॥
कृषिप्रवृत्तिं सर्वेषां देवानां प्रीतिदायिनीम् । यत्नतो रक्षयेयुस्तां जीवानां जीवनप्रदाम् ॥२४४॥ 4
वने जनपदे देशे क्षेत्रे ग्राम्ये भृगोस्तटे । कृषिप्रवृत्तिं संकल्प्यां मन्यन्ते हि मुनीश्वराः ॥२४५॥
पुरातनैस्तु मुनिभिरुटजाङ्गणभूमिषु । कृषिकर्मकृतं लोके सर्वप्राणिहितार्थिभिः ॥२४६॥
तदादि कृषिकार्यं तु खण्डशः सूक्ष्मबुद्दिभिः । नीतं देशेषु सर्वत्र फलदं चाभवत् क्रमात् ॥२४७॥
अतः कृष्यादानमेतत् सर्वैः पुरुषपुङ्गवैः । सूक्ष्मधीभिरिहासेव्यं शाश्वतानन्दहेतवे ॥२४८॥ 5

६. कृषिकार्यार्हद्रव्यसंग्रहणकथनम् ॥

काश्यप उपदिशति -

मेधावी कृषिकार्यज्ञः भूलक्षणविदां वरः । शुभे मुहूर्ते सुमनास्त्वदारंभे कृषिक्रियाम् ॥२४९॥ 6
सेवेत फलसिध्यर्थं त्रिमूर्तिध्यानपूर्वकम् । भूदेवीं धान्यदेवीं च स्मृत्वा मनसि निर्मले ॥२५०॥॥250॥ 7
पूजयित्वाऽथवा भक्त्या द्रव्यसंग्रहणोद्यतः । गोष्ठं गोस्थानकं वापि गोमयालेपनक्रियम् ॥२५१॥

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गन्धपुष्पाद्यलंकारभासुरं च विशेषतः। तिन्दुकैस्तिनिशैर्वापि सर्जकैः सारदारुकैः ॥२५२॥
गोबन्धनूलकं कृत्वा शृंखलाद्यैरथापि वा। अलंकृत्य तु तं देशं गन्धकुंकुमपुष्पकैः ॥२५३॥
प्रदक्षिणं वा कृत्वा तत्स्थले गाश्चारयेत् बुधः। शुभलक्षणसंयुक्ताः धेनूः संचारयेदिह ॥२५४॥
सवश्चाय वृषभान् श्वेताङ्गान् शुभलक्षणान्। सुवर्णकुप्यशृङ्गाग्रान् गन्धाद्यैश्चाप्यलंकृतान् ॥२५५॥ 1
घासैः शष्पैः पलालैश्च जलपात्रैश्च मंगलैः। पूरयेदथ तंदेशं गोष्ठे शुभमुहूर्तके ॥२५६॥
क्रीत्वा वा वृषभान् श्वेतान् शुभलक्षणमानितान्। धेनूर्वा महिषान् वापि बन्धयेत्तत्र कोविदः ॥२५७॥
लांगलान् रज्जुजटिलान् हलानपि विशेषतः। साङ्गान् निरीशवन्तश्च सारदारुकृतान् ततः ॥२५८॥
शुभस्थलेऽथ निक्षिप्य गन्धाम्रदलपुष्पकैः। चन्दनैः कुंकुमैर्वापि मण्डितांश्च विशेषतः ॥२५९॥
सह मङ्गलघोषेण धान्यदेवीं च पूजयेत्। भूदेवीमयु लक्ष्मीं च वाणीं गौरीं सुराधिपम् ॥२६०॥ ॥260॥ 2
वरुणं च धनेशं च पूजयित्वा विशेषतः। स्वकीयं क्षेत्रमासाद्य वृषभैः सह कोविदः ॥२६१॥
लाङ्गलैर्भद्रकैर्युक्तः सुमुहूर्ते सुलग्नके। कर्षणं कारयेदादौ ऐशान्ये कोणके शुभे ॥२६२॥
आग्नेये वापि वा भागे वारुणे वा क्वचित्स्थले। सलिलपूरणं कृत्वा सुकर्षाय तदा क्रमात् ॥२६३॥
प्रथमं कर्षणं भूमेः क्षेत्रे स्वीये विशेषतः। कारयेत् वृषवाहयेन हलेन कृषिकार्यवित् ॥२६४॥
एवं क्रमेण तत्क्षेत्रं चतुर्धा पञ्चधापि वा। हलेन कर्षयित्वा षट् दिवसं त्वधिकं तु वा ॥२६५॥ 3
लोष्टांश्च लगुडानन्यान् बहिर्निक्षिप्य गोमयम्। आजकं वालगं तत्र स्थापयेत् सारवृद्धये ॥२६६॥

1 सवत्सान्श्च 2 थ 3 ट्

खनित्रान् शंकुलान् क्षुद्रतलुकान् खड्गकान् तथा। छुरिका याश्च कृष्यर्हाः द्रव्यशास्त्रेषु निश्चितम् ॥२६७॥
युत्त्या तदानयेत्सर्वं लवित्रं लवसारकम् । यस्मिन् देशे यदा वृष्टिः प्रथमा हृश्यते क्षितौ ॥२६८॥ 1
तदा भूकर्षणं श्रेष्ठमाहुरत्र मुनीश्वराः। कूल्यामुखेन सलिलमापूर्य निजभूमिके ॥२६९॥
सस्यार्हकालेभूमेस्तु कर्षणं च मुनीरितम्। तस्मात्सर्वत्र देशेषु कृषिकालानुरुपतः॥२७०॥ ॥270॥ 2
मित्राणामुपदेशाच्च युत्त्या च कृषिकार्यवित्। आदौ भूकर्षणं कार्यं सुनिमित्ते सुलग्नकेः॥२७१॥ 3

## ७. लाङ्गलपूजाक्रमकथनम् ॥

काश्यप उपदिशति -

लक्षणात् पूर्वमेवेह लक्षणज्ञैः कृषिवलैः। लाङ्गलाद्यर्चनं कार्यं वृषादीनां विशेषतः ॥२७२॥ 4
क्षेत्रस्य वाथ भूम्याश्च पूजनं फलदायकम्। शुद्धतोयेन गन्धाद्यैः दीपदानैरथापि वा॥२७३॥
भूमिदेवी नमस्तेऽस्तु महि सर्वसहेऽधुना। कृष्यारम्भं करिष्यापि प्रसन्ना भव सुव्रते॥२७४॥ 5
कर्षणं ताडनं यच्च त्वयि यद्यत्कृतं मया। देवि क्षमस्व तत्सर्वं कुरु मह्यं महाफलम् ॥२७५॥
त्वमेव माता सर्वेषां प्राणिनामिह कीर्त्यते। अतः प्रसन्ना भूदेवि फलं देह्यमितं क्षितौ॥२७६॥ 6
इति स्तुत्वा प्रार्थयित्वा भूदेवीं विष्णुवल्लभाम्। प्रदक्षिणीकृत्य नमस्कारपूर्वं कृषीवलः॥२७७॥
दिग्देवान् रक्षकांश्चापि सूर्यमायुष्करं तथा। स्तुत्वा भूकर्षणविधौ कुर्यादारम्भमुत्तमम्॥२७८॥ 7

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## ८. तत्र वृषभराजपूजाक्रमकथनम् ॥

कश्यप उपदिशति -

सौरभेय महासार वृषराजामितद्युते । भूकर्षणविधौ त्वं हि साह्यं कुरु ममानघ ॥२७९॥

सुगन्धमाल्यपुष्पाद्यैरद्य त्वां पूजयाम्यहम् । फलदो भव मे त्वं तु धर्मकृत् स्वस्ति ते भृशम् ॥२८०॥ २८०

तृणैःशष्पैश्च सलिलैः त्वां पोष्याम्यहमादरात् । शंकरानुग्रहात् त्वं तु फलदो भव मे सदा ॥२८१॥ [1]

उत्पाद्य तनयान् शश्वत् त्वत्तुल्यबलवीर्यकान्त् । अलंकुरु त्वं गोष्ठं मे त्वां पोष्याम्यहमादरात् ॥२८२॥ [2]

वृषराज त्वमेवात्र धनधान्यादिवृद्धिकृत् । धर्मरुप त्वमेवेह तस्मात् त्वां पोषयाम्यहम् ॥२८३॥ [3]

देवयज्ञं भूतयज्ञं यथा मे सफलं भवेत् । तथा दयां कुरु त्वं तु चापराधं क्षमस्व मे ॥२८४॥

इति संप्रार्थ्य वृषभं पूजयित्वा विशेषतः । श्रान्ता यथा ते न कलान्तांस्तावत्तत्कार्यमीरितम् ॥२८५॥ [4]

तन्मनः क्लेशहेतुस्तु विफलाय विनिश्चितः । तस्मान्न योजयेच्छ्रान्तान् वृषभान् कृषिकर्मणि ॥२८६॥

तदा गोपूजनं शस्तमित्याहुर्मुनिसत्तमाः ॥

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९. संग्रहेण गोवृषभलक्षणकथनक्रमः ॥

काश्यप उपदिशति -

गावश्च वृषभाश्चैव शुभलक्षणभासुराः । शुभदाः स्वामिनां प्रोक्ताः देशक्षेमप्रदाश्च ते ॥२८७॥

कृषिकर्मणि ते योग्याः वृषभा वृषवर्धकाः । श्वेताङ्गाः किंचिदुत्तुङ्गाः वृषभा मञ्जुनेत्रकाः ॥२८८॥

गम्भीरनिनदा ये च ते तु ब्राम्हण जातिकाः । रक्ताङ्गा नितरां तुङ्गाः गंभीरनिनदाश्च ये ॥२८९॥

तेजोबलसमेताश्च ते वृषाः क्षत्रजातिजाः । श्वेतरक्ताङ्कनैर्युक्ताः तन्मण्डलविभूषिताः ॥२९०॥ ॥२१०॥

नातितुङ्गा नातिनीचाः ते वृषा वैश्यजातिजाः । कृषाङ्गा नातितुङ्गाश्च कोपवेगेन ताडिताः ॥२९१॥

सुवन्तश्च ते वृषाः शूद्रजातिजाः । एते सर्वे प्रशस्ताश्च कृषिकर्मणि योग्यकाः ॥२९२॥ 1

नातिदीर्घं न च कृशं वृषशृङ्गद्वयं शुभम् । मिथो वैषम्यहीनं च वृषशृङ्गं प्रशस्यते ॥२९३॥

खुराश्च वृषभाणां तु न कृशा नातिदीर्घकाः । वैषम्यहीनाश्च तथा दृढाः श्लाघ्या विनिश्चिताः॥२९४॥

शुभा गतिर्दीर्घवालः वृषभाणां प्रशस्यते । नातिस्थूला न च कृशाः भारवाहित्वमेव च ॥२९५॥

प्रसन्नत्वं कार्यकाले वृषाणामुत्तमा गुणाः । खुरे विषाणे श्वेतश्च ललाटे पुच्छकेऽपि च ॥२९६॥ 2

वर्णान्तरविभूतिश्च वृषः शुभविवृद्धिदः । रम्यात्मानश्च हृष्टाश्च शुभवर्णसमुज्ज्वलाः ॥२९७॥

शुभावर्तादिसहिताः धनधान्यविवृद्धिदाः । सूक्ष्मरोमावलीव्याप्ताः गंभीरनिनदाश्च ये ॥२९८॥

मनोज्ञनयनोपेताः वृषभाः शुभदा मताः । रक्तवर्णा महाशृङ्गाः तेजोबलविवर्जिताः ॥२९९॥

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स्खलद्गतियुताश्चापि क्रोधनिद्रावशं गताः । कृशाङ्गा धूम्रवर्णाश्च तथा बह्वाशिनश्च ये ॥३००॥ ॥300॥

ये विवर्णाश्च वृषभाः नितरां नीचकाश्च ये । कर्कशाङ्गाः क्रूरखाः वर्ज्यास्ते वृषभाधमाः ॥३०१॥

संपूर्णश्वेतकायाश्च रक्तकायास्तु वा वृषाः । शुभदा धनधान्यादिवृद्धिदाः परिकीर्तिदाः ॥३०२॥ 1

दोषहीना गुणोपेता वृषभाः शुद्धजातिजाः । संग्राह्याः क्षेमसिध्यर्थं कृषिकारैर्विशेषतः ॥३०३॥

सुलक्षणा धेनवश्च महिषाश्च तथा मताः । महिष्यश्च बहुक्षीराः रक्षणीयाः कृषीवलैः ॥३०४॥

मेषाश्छागाश्च बहुधा कृषिकार्यफलप्रदाः । परंपरोपदेशेन परिक्षास्वपि पण्डितैः ॥३०५॥

निश्चितान् दोषहीनांश्च वृषभादीन् शुभार्थिनः । रक्षेयुश्च प्रयत्नेन कृषिसाफल्यहेतवे ॥३०६॥

कालेषु पोषणीयश्च हिताहारप्रदानतः । रोगेभ्यो रक्षणीयाश्च लालनादिभिरन्वहम् ॥३०७॥ 2

गोष्ठस्थलं निर्दिशेच्च तेषां पुष्टिप्रदं बुधः । कृषिकर्मणि याद्यं तु सहाया वृषभोत्तमाः ॥३०८॥

अतः सत्कुलसंजाता धेनवश्च विशेषतः । कृषीवलैस्तत्रतत्र ग्रामेषु नगरेष्वपि ॥३०९॥

शुभलक्षणसंपन्नाः धेनवस्तु परः शतम् । पालनीयाः कृषिकरैः ग्रामेषु नगरेष्वपि ॥३१०॥ ॥310॥

पलालतृणनीराद्यैः लालनैर्बहुरक्षणैः । धर्मकामार्थसिद्धिस्तु धेनूनां पालनात् भवेत् ॥३११॥

रोगप्रशान्तिश्च तथा बालवृद्धादि रक्षणम् । गोसहस्रं यत्र देशे पाल्यते प्रीतिपूर्वकाम् ॥३१२॥ 3

तत्र देशेषु पर्जन्यो वर्षत्येव न संशयः । गवां रक्षणतो दानात् देवानां प्रीतिरुत्तमा ॥३१३॥

अतः प्रजानां क्षेमादिरित्येवं भार्गवोऽब्रवीत् । अतः सर्वप्रयत्नेन गोगणं तु कृषीवलाः ॥३१४॥

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रक्षेयुश्च वनान्तेषु ग्राममध्ये च सर्वतः। स्वयं भृत्यगणैश्चापि गोपालैश्च विशेषतः॥३१५॥

प्रत्यब्दं तु शुभे काले गोपूजा च विशिष्यते। दिनान्ते प्रत्यहं तासां गन्धपुष्पादिपूजनम्॥३१६॥

यशस्यं शुभदं प्रोक्तं सर्वशास्त्रेषु कीर्तितम्। सत्सन्तानप्रदं पुंसां त्रिवर्गफलदं तथा॥३१७॥

छायासु ताश्च ते छागवृषभाद्याः क्रियाकराः। मध्याह्नकाले ग्रीष्मे तु स्थाप्या रक्ष्याश्च धीमता॥३१८॥

शीतकालेषु गोष्ठे तु हिताहारार्पणादिभिः। संरक्ष्याः क्षेमसिध्यर्थं कुटुम्बस्यापि भूपतेः॥३१९॥

गोरक्षणं तु भूपालैः कर्तव्यं धर्म्यमीरितम्। चोराच्च दुष्टसत्वाच्च तद्रक्षणमथार्पणम्॥३२०॥॥३२०॥

महाफलं समुद्दिष्टं कृषिकार्ये विशेषतः।

इति शास्त्रोपदेशक्रमः॥

-o-

अथ प्रथमो भागः (१)

॥धान्यादिकृषिक्रमकथनम्॥

१०. सस्यार्हकालपरिक्षात्क्रमः

क्षेत्र विभागक्रमश्च

काश्यप उपदिशति -

कृषिकार्यक्रमविदो लोके सर्वत्र धीजुषः। वृषभान् महिषान् धेनूः भृत्यानपि च सेवकान्॥३२१॥

------------------ । पोषयित्वा नियोगज्ञान् कृषिं क्षेत्रेषु कल्पिताम्॥३२२॥

वर्धयेयुः क्रममुखं विविधं क्षेत्रयोग्यताः। आदौ कालपरीक्षात्र मुख्यकल्या विधीयते॥३२३॥

काश्मीरदेश्यके वङ्गदेश्ये नेपालदेश्यके। पाञ्चालकोसलकुरुविराटावन्त्य भूमिके॥३२४॥

मालवे शकदेश्ये वा सिंधुसौवीर भूमिषु। शूरसेनावन्तिचेदिकोंकणान्ध्रादि भूमिषु॥३२५॥

यदायदा वृष्टिपातस्तदा शस्ता कृषिक्रिया। यत्र ग्रीष्मादिकालेषु नदीकुल्यादि मार्गतः॥३२६॥

क्षेत्रेषु सलिलोत्क्षेपः तदा शस्ता कृषिक्रिया। यत्रागाध जलाधारप्रणालीकुल्यकामुमुखात्॥३२७॥ 1

यत्रयत्र जलोत्क्षेपः तदा तत्र कृषिः शुभा। मेघोदयजलस्रावमगाधसलिलाशयम्॥३२८॥

कुल्याजलसमृद्धिं च वीक्ष्य धीमान् कृषीवलः। कृषिं प्रकल्पयेत् युक्त्या स्थलसंपत्क्रमात् भुवि॥३२९॥

द्विधा विभक्तानि लोके क्षेत्राणि स्वीयरूपतः। तत्रतत्र नदीतीरे ग्रामेष्वपि वनान्तरे॥३३०॥॥३३०॥

पर्वतस्य तटे चैवं निम्नोन्नततलेऽपि च। शालिभूमिस्तु तत्राद्या मुनिभिः कथितोत्तमा॥३३१॥

द्वितीयाढकभूमिस्तु मध्यमापि फलप्रदा। शालिभूमिस्तु सलिलप्रचुरा तु स्वभावतः॥३३२॥

संपूर्णकर्दमाख्याता नितरां मृदुमृत्तिका। कुल्योपकुल्या शाखालिंगुभिता तज्जलंस्रवा॥३३३॥

समन्ततः क्षुद्ररूपरक्षामृत्तिकाभित्तिकाः। खलस्वरूपतो वापि ग्रामवास्तुस्वरूपतः॥३३४॥ 2 3

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क्षेत्रपुङ्गि[1]स्वरुपाद्वा शालिभूमिस्थितिर्मता । प्राच्यां क्वचिन्निम्नभागा प्रतीच्यामथ च क्वचित्॥३३५॥

याम्ये क्वचिन्निम्नतला कौबेर्यां निम्नभूमिका।क्वचित्प्रायः समतला कुल्या नीरग्रहोन्मुखी ॥३३६॥

क्षेत्रात् क्वचित् क्षेत्रतलप्रवेशार्हजलस्त्रवा । एवं स्वरुपं विविधं शालिभूम्यास्तु निश्चितम् ॥३३७॥

प्रथमाकर्षणादीह[2] व्रीहयुत्पत्त्यवधि क्षितौ । शालिभूः पूर्णसलिला ख्याता पूर्णफलप्रदा॥३३८॥

ग्रामादिवास्तुभूम्यां च वनान्ते च तटे कुचित्। उन्नता भूर्द्वितीया सा कथितााढकभूमिका॥३३९॥

स्वल्पोदबिन्दुसंसेव्या चणकाढकवर्धिनी । नैतस्या जलकुल्यादि प्रकल्पनमुदीरितम्॥३४०॥।340॥

प्रायेण स्वल्पसलिलसेकात् कर्षणयोग्यका । ततो बीजावापकाले किंचित्सलिलपानता॥३४१॥

एवं समुचिते काले जीवनं बीजजीवदम्। एतादृशगुणोपेता कथिता चाढकस्थली ॥३४२॥

शालिभूम्याश्चाढकादिभूम्याश्चार्हं कृषीवलैः। बीजसंग्रहणं नानारुपमत्र मुनीरितम्॥३४३॥

## ११. नानाविधबीजसंग्रहणक्रमकथनम् ॥

काश्यप उपदिशति -

पूर्वं संप्रार्थितो धात्र्या धाता लोकपितामहः ।बीजानि विविधानीहासृजत्पुनरचिन्तयत्॥३४४॥

तदाशयं विदित्वा तु भूमिदेवी महोदया। उवाच हर्षेण विधिं प्राणिनां सुखसिद्धये ॥३४५॥

विधे ननु त्वया सृष्टानीमानि विविधानि तु। बीजानि मयि निक्षिप्तान्यादरादचिरेण हि ॥३४६॥

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प्राप्ताङ्कुराणि नियतं भविष्यन्ति न संशयः। तवानुग्रहभूम्ना च वासवस्य विशेषतः॥३४७॥

प्रत्यब्दं मेघवृष्टिश्च नियतेन भविष्यति। यथाकालं प्राप्तवर्षाः प्रजाः सर्वत्र सर्वतः॥३४८॥

कृत्वा बीजावापनं तु सुक्षेत्रेषु विशेषतः। संपूर्णफलभाजश्च पुष्टा हृष्टाश्च नित्यतः॥३४९॥

भविष्यन्ति कृषिज्ञाश्च नानादेशेषु भूतले। देवानां प्रीतिरतुला यज्ञादीनां विवर्धनम्॥३५०॥ ॥350॥

प्रजानामतिथीनां च प्रीणनं भोजनादिभिः। धेन्वादिप्रीणनं काल्यं सफलं भूतयज्ञकम्॥३५१॥

इति विज्ञापितो देव्या मेदिन्या कमलासनः। तथास्त्वित्यब्रवीद्वाक्यं सर्वप्राणिहितप्रदम्॥३५२॥

तदादिलोके सर्वत्र बीजानि विविधानि तु। रक्ष्यन्ते कृषिकर्मज्ञैः मानवैः सूक्ष्मबुद्धिभिः॥३५३॥

शाल्यादिकस्तु प्रथमः निर्दिष्टो हि मुनीश्वरैः। आढकादिर्द्वितीयश्च तृतीयः शाकसन्ततिः॥३५४॥

लताकुसुमवर्गस्तु चतुर्थः किल कीर्तितः। एतच्चतुर्विधं लोके कृषिकर्म विनिश्चितम्॥३५५॥

पुष्टिप्रदं च फलदं मानवानां विशेषतः। सर्वर्तुष्वपि संतोषजनकं देवतुष्टिदम्॥३५६॥

गोवृषोष्ट्राश्वकुंभ्यादिजीविनां जीवदायकम्। नारदाद्यैर्योगिवर्यैरुपदिष्टं हि भूतले॥३५७॥

सुहीपालैरुत्तमैश्च स्वस्वदेशस्थलीष्वपि। कृषिकर्म कृतं भक्त्या भृत्यवर्गैश्च रक्षितम्॥३५८॥ [1]

तदादि ब्राम्हणवरैः क्षत्रियैर्वैश्यजातिजैः। शूद्रैरन्यैश्च बहुधा सुक्षेत्रे कालयोग्यकम्॥३५९॥

आरब्धं कृषिकार्यं तु बीजमुख्यं प्रकीर्तितम्। अतः सुधीभिर्भूलोके कृषिकर्मविदां वरैः॥३६०॥ ॥360॥

बीजानां संग्रहो युक्त्या कल्पनीयो विनिश्चितः। नामानि क्रमशो वक्ष्ये बीजानामिह सिद्धये॥३६१॥

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शाल्यादिःकलमादिश्च षष्टिकादिश्च तत्त्रिधा। रसवर्णकजात्याद्यैः विभक्तं कृषिकोविदैः ॥३६२॥

किंचित् घनास्तु कलमाः रसाधिक्याः समुज्ज्वलाः। षष्टिका रसहीनाश्च कृताः कमलयोनिना॥३६३॥

शालिव्रीहिस्तु षड्विंशद्भेदकः परिकीर्तितः। तत्रतत्र हि देशेषु भूमिभेदेन कोविदैः ॥३६४॥

बीजावापः प्रकर्तव्यो यथाकालमतन्द्रितैः। तस्मात्सर्वप्रयत्नेन तद्रक्षणमुदीरितम् ॥३६५॥

श्वेतशालिः रक्तशालिः स्थूलशालिस्तथैव च। दीर्घशालिःस्वादुरसः कलमः श्वेतवर्णकः ॥३६६॥

रक्तवर्णश्च कलमः कलमः स्थूलदेहकः। दीर्घाकृतिश्च कलमः व्रीहिर्हैमाख्य शंबकः ॥३६७॥

कपिशः शंबको ऽन्यश्च रक्तशंबश्च वर्णतः। कृष्णशंबश्चान्यरुपः[1] नितरां रसवन्मतः ॥३६८॥

शुकव्रीहिः स्थूलकायो व्रीहिश्चान्यः प्रकीर्तितः। घनव्रीहिश्च पलशव्रीहिश्च रसमेदुरः ॥३६९॥

स्वादुव्रीहिश्च नितरां फलव्रीहिस्तथा परः। द्राक्षाव्रीहिश्चापरस्तु नीवारःश्वेतकृष्णकः॥३७०॥ ॥370॥

यवौ च श्वेतकृष्णौ च स्थूलाकारस्तथैव च। समरव्रीहिरपरः नितरां राशिकारकः ॥३७१॥

कलव्रीहिश्च परमः नितरां पुष्टिदायकः। सितव्रीहिः पीतवर्णः व्रीहिश्चाजीर्णहारकः ॥३७२॥

इति षड्विंशतिभिदा कल्पिता धान्यराशयः। सर्वेषामपि चैतेषां बीजानां रक्षणं क्रमात् ॥३७३॥

अर्कातपे शोषितानां सुपक्वानां खलस्थले। स्वग्रहे[2] वा रक्षणं तु प्रधानं शुभवर्धकम् ॥३७४॥

भूपालैरथवा रक्ष्यं काले देयं प्रकीर्तितम्। बीजराशिः परश्रेयः कृषेस्तु प्रथमं धनम् ॥३७५॥

नराणामपि देवानां प्रीतिदं दानयोग्यकम्। तस्मात् कृषिवलैर्युक्त्या बीजसंरक्षणं वरम् ॥३७६॥

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एतानि तानि बीजानि संपूर्णफलदानि च । मासेषु त्रिषु वा तानि चतुर्मासेऽथवा स्थले ॥३७७॥

कानिचित् पञ्चमासेषु षण्मासेष्विह कानिच । सप्तमासेष्वष्ट मासेष्वधिकक्रमतः क्वचित् ॥३७८॥

फलदानि सुपक्वानि निर्गीतानि मुनिश्वरैः । तस्मात् स्त्रदेशे क्षेत्रेषु जलस्त्रावानुकूलतः ॥३७९॥ [1] [2]

शाल्यादिकृषिकार्येषु चारम्भः सुखसिद्धये । पूर्वपुरुषकार्यादिक्रमतस्तु क्वचित्स्थले ॥३८०॥ ॥३४०॥

मेघोदयजलस्त्रावक्रमतश्चान्यतो भूवि । देशकालानुगुण्येन कृषिकर्म प्रशस्यते ॥३८१॥ [3]

नरेन्द्राणां प्रजानां च फलदं परिकीर्तितम् । धेन्वादीनामपि तथा पतङ्गानामपि क्रमात् ॥३८२॥

जीवसौख्यप्रदमिदं कृषिकर्म सुनिश्चितम् । एवमाढकबीजानि माषबीजानि च क्रमात् ॥३८३॥

मुद्रानां चणकानां च गोधूमानां विशेषतः । तिलानां कीरकानां च कोद्रवाणां क्वचित्स्थले ॥३८४॥ [4]

यवराणां कुलुत्थानां श्यामानां कृष्णसारिणाम् । इक्षूणामपि पुण्ड्राणां जातिभेदरसक्रमैः ॥३८५॥

विभक्तानां बहुविधं धान्यानामुष्णबीजकम् । जीरकानां सर्षपानां मरीचीनां तथैवच ॥३८६॥

विधेयानां च तूलान् मेरण्डानां क्वचित्स्थले । एतेषामपि बीजानां रक्षणं सुखदायकम् ॥३८७॥ [5]

पटोलिकानां बीजानि वार्ताकानां तथैव च । जटिका राशिजटिका वल्लिका वनवल्लिका ॥३८८॥

पवका चापि विविधा रसपूर्णा च कीर्तिता । शाकाश्च विविधा वर्णरसजातिप्रभेदकाः ॥३८९॥

कूश्माण्डानां कलाटानां नानारूपं तु बीजकम् । कुस्तुंबानां कटानां च धान्यकानामपि क्वचित् ॥३९०॥ 390 [6]

हरिद्राणां च शुष्ठीनां बीजसंरक्षणं शुभम् । सूरणानां च कन्दानां शाकुटानां तथैव च ॥३९१॥ [7]

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रसकानामपि तथा कदलीनां विशेषतः । बीजसंरक्षणं कार्यं कृषिकर्म विशारदैः ॥३९२॥

एला द्राक्षा च नलदं नागवल्ली रसोज्वली । पूगानां क्रमुकानां च बीजसंरक्षणं शुभम् ॥३९३॥ 1

मल्लिकापीतपुष्पाणां कुन्दानामपि बीजकम् । रक्षेयु रतिमुक्तानां चांपेयानामपि क्वचित् ॥३९४॥ 2

शिग्रूणां भूर्जकानां च करंजानामपि क्वचित् । शमीनां नक्तमालानां देवदार्वाख्यभूरुहाम् ॥३९५॥ 3

विभीतकप्रियंग्वोश्च तथामलकभूरुहाम् । पिण्डीतकानां निम्बानां लिकुचानामपि क्वचित् ॥३९६॥

शिरीषाणामशोकानां दाडियानां तथैव च । श्रीपर्णीनां तमालानां सिन्धुवाराख्यभूरुहाम् ॥३९७॥

कपित्थानां च जम्बूनां सप्तपर्णाख्यभूरुहाम् । बीजसंरक्षणं कार्यं सुखाय च कृषीवलैः ॥३९८॥

उदुम्बरश्चलदलाः तिनिशाः पारिभद्रकाः । पलाशाश्च मधूकाश्च वटाः प्लक्षा रसालकाः ॥३९९॥

तिन्दुकास्तिलका नीपाश्चार्जुनाः सर्जकाश्च ये । बदराः पीलुवृक्षाश्च जंबीराः पुन्नागाश्च ये ॥४००॥ ॥400॥

वंशाः काशाश्च विविधाः मातुलुंगाख्यभूरुहः । एवं तु विविधा वृक्षाः पत्रैः पुष्पैः फलैरपि ॥४०१॥

फलप्रदा मानवानां पतङ्गानां विशेषतः । वटादयो महावृक्षाः ये चान्ये परिकीर्तिताः ॥४०२॥

सर्वेषामेव तेषां तु बीजसंरक्षण हितम् । सुपक्वानामातपे तु शोषितानां विशेषतः ॥४०३॥

बीजानां सन्तती रक्ष्या भाण्डेषु विविधेषु च । पलालराशिषु तथा कुण्डेष्वपि कृषीवलैः ॥४०४॥

शशमूषकमार्जारैः न दूष्या बीजसन्ततिः । जलराशिकणैर्वापि वातवृष्ट्यादिभिस्तथा ॥४०५॥

यथा न दूषिता दोषैरन्यैश्च विविधैरपि । बीजानां सन्ततिः पाल्या तथा गेहे खलस्थले ॥४०६॥

बीजानामुत्तमानां तु पालनं धर्मबुद्दितः । श्रेयसे कृषिकानां तु कथितं मुनिपुंगवैः ॥४०७॥
शाल्यादिबीजानि तथा शाकबीजानि वा पुनः । वृक्षाणामपि बीजानि कन्दानामपि बीजकम् ॥४०८॥
क्रीत्वा संगृहय वा लोके कृषिकर्मविदो नराः । ब्राम्हणाः क्षत्रिया वैश्याः शूद्रा संकीर्णजा अपि ॥४०९॥
स्वक्षेत्रेषु स्वदेशस्थेष्वादरात् युक्तितस्तथा । नानारुपेषु वृषभैः कर्षितेषु विशेषतः ॥४१०॥ ॥४१०॥ [1] [2]
काले समुचिते सिक्तान्यथवा वर्धितानि च । आवापविधिना युक्त्या विन्यसेयुर्यथाक्रमम् ॥४११॥

## १२. बीजावापार्थं भूकर्षणक्रमः ॥

काश्यप उपदिशति -

बीजावापस्तु विविधो निर्दिष्टः शास्त्रकोविदैः । क्वचित् शालेयभूम्यांतु कर्षणं वृषभैः शुभैः ।४१२।
अतो निर्दिष्टमेतेषां बीजानां व्रीहिसन्ततेः । कन्दादीनामपि तथा वर्धनं प्रथमं स्थले ॥४१३॥
कार्यमित्येवमादिष्टं कृषिकर्मविचक्षणैः । जलक्षेत्रे च तद्भिन्नै जलसिक्ते शुभस्थले ॥४१४॥ [3]
भूकर्षणं च वृषभैः कारयित्वा यथाक्रमम् । बीजावापनयोग्यानि क्षेत्राणि विविधानि तु ॥४१५॥ [4]
कारयित्वा समीकृत्य चाङ्कुरन्यसनं तु वा । कल्पयेयुर्यथाशक्ति युक्त्या च स्थलयोग्यकम् ॥४१६॥
आक्रीडे चापि चारामे नृपोद्याने तथैव च । ग्रामस्य नगरस्यापि बहिरंतस्तु वा स्थले ॥४१७॥
वृषभैर्भूकर्षणं च खनित्राद्यैः समक्रिया । खेटाद्यैश्च समीकारः क्षेत्राणां परिकीर्तितः ॥४१८॥

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सीताक्रमश्च क्षेत्रेषु बीजावापाय कोविदैः। क्वचित्कल्पश्च निर्दिष्टः क्वचिन् खननमेव च ॥४१९॥
कन्दादीनां स्थापनार्थमवटं वा प्रकल्पयेत्। कदल्याद्या ये च लतास्तरवः संप्रकीर्तिताः ॥४२०॥ ॥420॥
तेषा बीजाङ्कुरं युक्त्या कन्दस्थापनमेव च। लतया वर्धनं चापि विविधं कृषिकोविदैः ॥४२१॥
समीकृते हि सुक्षेत्रे यथाकाले सपेष्टके। न्यसनं फलदं चोक्तमृषिभिस्तत्त्वदर्शिभिः॥४२२॥
तस्मात् भूकर्षणं शस्तं शालिक्षेत्रे लतास्थले। शाकादिवृद्धयर्हभूमौ उद्याने वृक्षकस्थले ॥४२३॥
कर्षणं चावटं सीता रेखाकल्पनमेव च। तत्तत्क्षेत्रानुकूल्येन कल्पयेत् कृषिकोविदः ॥४२४॥
जलसेकात् तेन हीनमर्करोचिच्छटाक्रमात्। शुष्कितं वा स्थले धीमान् बीजावापाय निर्दिशेत् ॥४२५॥ [1]
लतादिस्थापने चैवं वृक्षाणां स्थापने तथा। कदलीकन्दविन्यासे ह्यङ्कुरस्थापनेऽपि च ॥४२६॥
भूकर्षणादिकं सर्वं कृषिकार्यं तु युक्तितः। परंपरोपदेशाच्च कारयेत् फलसिद्धये ॥४२७॥

## १३. अथ विविधधान्यप्राप्त्यर्थं कृषिक्रमादिकथनम् ॥

काश्यप उपदिशति-

कोसलादिषु देशेषु नदीसलिलपूरिते। सस्यक्षेत्रसमूहे तु शाल्यादिः कृषिरुत्तमा ॥४२८॥
निर्दिष्टा मुनिभिस्तस्मात् धीमद्भिस्तु कृषीवलैः। कलमव्रीहिनिवहान् प्राप्तुं कृतविनिश्चयैः ॥४२९॥
जलाशयानामथवा नदीनां च ह्रदस्थले। कुल्यामुखात् यथाकालं सस्यक्षेत्रेषु चोदितम् ॥४३०॥ ॥430॥

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आदावापूर्य तदनु कर्षणं वृषभैर्मतम् । ततः सलिलपूर्णानि सस्यक्षेत्राणि मानवाः ॥४३१॥
शांकरात् दिक्कोणभागादथवा तु क्वचित् स्थले । प्राच्यां प्रतीच्यामथवा कर्षणं शुभदायकम् ॥४३२॥
पूर्वमेव क्वचिद्देशे निबिडं वर्धितानि च । शाल्यङ्कुराणां जालानि चोत्खातक्रममादिशेत् ॥४३३॥
बन्धीकृत्य तु तज्जालं कर्षणान्मृदुतां गते । जलकर्दमभूयिष्ठे शालिक्षेत्रे सुलग्नके ॥४३४॥
अजाशकृत्कणैरेवं गवां चापि शकृत्कणैः । लताव्रततिभिर्वापि प्राप्तसारे सयत्नके ॥४३५॥
पङ्क्तिशः पङ्क्तिशो भृत्यैः विन्यसेत्समभूमिके । तत्र क्षेत्रे स्वल्पजलं स्थापनीयमनन्तरम् ॥४३६॥
जलाधिक्यास्रावमार्गः कल्पनीयो विशेषतः । यथा सस्याङ्कुराणां तु नाशस्तु न भवेत्तथा ॥४३७॥
तथा तद्रक्षणं कार्यं तत्कर्मफलदं विदुः । एवमङ्कुरजालानां विन्यासश्च क्रमान्मतः ॥४३८॥
यत्राङ्कुराणां नाशस्तु वृष्ट्यादिबहुकारणैः । संपादितस्तथा धीमान् तत्र देशे प्रयत्नतः ॥४३९॥
नवाङ्कुराणां न्यसनं फलदं परिकल्पयेत् । ग्राम्येषु क्षेत्रजालेषु वन्ये वाथ स्थलान्तरे ॥४४०॥ ॥440॥
एकद्वित्रि चतुःपञ्च कुटुम्बिभिरुदस्थले । दशकैर्विंशतिगुणैः वृषभैर्युगपङ्क्तिभिः ॥४४१॥
एकदा सस्यभूमीनां कर्षणं सस्यवृद्धिकृत् । ऐकमत्यात् ग्रामजनैः बहुयुग्यप्रयोगतः ॥४४२॥
एकदा बीजविन्यासः फलदश्च प्रकीर्तितः । एवं सकर्दमजले शालिक्षेत्रे विशेषतः ॥४४३॥
ग्राम्ये वा नगरे वापि वन्ये वनतलान्तरे । सकुल्याजलनिस्रावे शाल्यङ्कुरगणेऽर्पिते ॥४४४॥
जलाधिकक्षये तत्र कल्पिते बहुवक्त्रके[1] । क्षेत्रन्यस्ता शालिबीजाङ्कुरपाली तु भूतले ॥४४५॥

1 वक्त्र

दिनानि सप्तदश वा तीर्त्वा सा कृष्टभूमिके ।संप्राप्तमूला वृद्ध्यर्थं ब्रम्हणा तु विधीयते ॥४४६॥
ततो बहिर्नवदलप्राप्तिश्च शुभदर्शनम् । या कान्तिः शुकपत्रेषु दृश्यते सुमनोहरा ॥४४७॥
तया कान्त्याञ्चिता भाति बालेवारुढयौवना । एवं तु प्रथमे मासे गते व्रीहिस्थले भुवि ॥४४८॥ 1
कलमादिदलानां हि वृद्धिः संदृश्यते क्रमात् । परितोऽङ्कुरवृद्धिश्च तत्समा कान्तिभूषिता ॥४४९॥
प्रत्यहं पीततोया च फलदानाय कल्पते । सस्यक्षेत्रसमूहेषु तदानीं तृणकोष्ठकाः ॥४५०॥ ॥450॥
सकर्दमजलेष्वत्र वृद्धिभाजश्च निश्चिताः । त एव सस्यरिपवो निश्चिता मुनिसत्तमैः ॥४५१॥
तस्मात् कृषीवलैर्युक्त्या तदा तु तृणकोष्ठकाः । मुञ्जाद्याश्चान्यदोषा ये निरस्या यत्नतो भुवः ॥४५२॥
मुञ्जाकोष्ठतृणादीनां फलहानिप्रदायिनाम् । सस्यवृद्धिक्षयकृतां मूलतश्छेदनं शुभम् ॥४५३॥
शालेयभूमिषु तदा जलमापूर्य कोविदः । तृणकोष्ठान् निस्याथ पङ्क्तिशः पङ्क्तिशः क्रमात् ॥४५४॥ 2
भृत्यवर्गैः प्रत्यहं वा वैरिछेदः प्रशस्यते । सस्यक्षेत्रेषु सर्वत्र चैवं रीत्या तृणादिषु ॥४५५॥ 3
द्विषत्सु संनिरुध्देषु यत्नतस्तु कृषीवलैः (संनिरस्तेषु) प्राप्तशोभा वृद्धियुता भासते शालिसन्ततिः ॥४५६॥ 4
ततो द्वितीयमासे तु शालिवृद्धिश्च निश्चिता । तदानीमपि ये केचित् तृणादिरिपवो यदि ॥४५७॥
भवन्ति सस्यक्षेत्रेषु तन्निरासश्च युक्तितः । महाफलायकथितः सस्यानां बहुरुपिणाम् ॥४५८॥ 5
श्वेतशाली रक्तशालिः कलमाद्याश्च ये पुरा । निर्दिष्टा विविधा धान्यराशयो बहुजातिकाः ॥४५९॥
सर्वेषामपि तेषां तु कृषिकार्यं हि तुल्यकम् । भूमीनां कर्षणं चादौ ततो बीजाङ्कुरार्पणम् ॥४६०॥ ॥460॥

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1 रू 2 निरस्या 3 च्छे 4 संविरस्तेषु (Reading suggested by the scribe) 5 रू

तृणकाष्ठोत्क्षेपणं च पुनस्तत्कर्म चादरात्। जलसंपूरणं चैव शालिसंरक्षणं तथा ॥४६१॥

तुल्यरूपं तुल्यकार्यं निश्चितं कृषिकोविदैः। तथापि शालयः शंबाः कलमाद्याश्च भूमिषु॥४६२॥

जातिभेदाद्वर्णभेदात् त्रिमासफलदास्तु ते। केचिच्चतुर्मासफलाः पञ्चमासफलाः परे॥४६३॥

षण्मासफलदाश्चान्ये तदाधिक्यफलप्रदाः। तस्मात्तद्धान्यकणिक[1]प्रादुर्भावक्रमं भुवि ॥४६४॥

ज्ञात्वा कृषीवलैस्तावत् तेषां सलिलपूरणम्। निर्दिष्टं कृषिकर्मज्ञैः देशे सर्वत्र सर्वतः ॥४६५॥

यदा तु धान्यकणिकाराशिः सस्याग्रपङ्क्तिषु। क्षीरगर्भो घनः किंचिदानतः दृश्यते क्रमात् ॥४६६॥

तदा तत्कणिकाराशिरक्षणं तु शुकादपि। तुल्यमेव विनिर्दिष्टं नानादेशेष्वपीरितम् ॥४६७॥

एवमन्तः क्षीरपूर्णा धान्यानां कणिकावलिः। क्रमादन्तः सारवती तत्सारस्तण्डुलोदयः ॥४६८॥

तावत्पर्यन्तमेतेषां सलिलस्य प्रपूरणम्। शस्तं च फलदं प्रोक्तं अन्यथा फलहीनता ॥४६९॥

तस्माद्वी[2]ह्यन्तरसकृत् क्षीरवृद्धिक्रमादिकम्। ज्ञात्वा तत्समये मूले सस्यानां क्षीरवृद्धये ॥४७०॥ ॥470॥

क्रमेण सलिलस्रावः कर्तव्यस्तु कृषीवलैः। नदीजलाशयजलपूरणं वा क्वचित्स्थले ॥४७१॥

ह्रदकूपादि सलिलपूरणं वा प्रयत्नतः। तदा फलप्रदं प्रोक्तं प्राणिनां सुखसिद्धये ॥४७२॥

वसुंधराया वरतः संकल्पात् ब्रम्हणस्तथा। उप्तानि सस्यक्षेत्रेषु बीजानि विविधानि तु॥४७३॥

फलदानि भवन्तीह वृद्धिं प्राप्य क्रमाद्भुवि। स्वयमेवंविधान्येव भासुराणि महीतले॥४७४॥

मूषकात् शलभात्कीरात् शुकादपि च दुष्टतः। प्राणिवर्गाद्रक्षणं तु विशेषफलदं विदुः ॥४७५॥

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[1] का [2] द्री

परस्परं स्नेहवन्तः ग्राम्याः कृषिकरा जनाः। सस्यानां कलमादीनां वयो निश्चित्य रूपतः ॥४७६॥ 1

साक्षादनुभवाद् बीजशक्त्या च स्थलवैभवात्। शाल्यादीनि सुपक्वानि रक्षितान्यनुजीविभिः ॥४७७॥

प्रदक्षिणादिभिर्मान्यानीह प्राणिहितानि च। यदा तु धान्यकणिकाराशौ पक्वे यथाक्रमम् ॥४७८॥

तत्तद्वयः कालयोगात् तदा न जलसेवनम्। कार्यमित्येवमादिष्टं कृषितत्त्वविदां वरैः ॥४७९॥ 2

शालिक्षेत्रेषु सर्वेषु कथितोऽयं क्रमो बुधैः। तस्मात् तद्व्रीहिकणिकाः पक्वकाले कृषीवलाः ॥४८०॥ ॥480॥

अतन्द्रा रक्षेयुरेताः दोषाद्विविधरूपतः। एवं तद्व्रीहिकणिकागणे पक्वे दलाग्रके ॥४८१॥ 3

व्रीहिकाण्डावलिः साग्रा (भव) पततीह भुवो तदा। एवं तां पतितां दृष्ट्वा दिनविंशतिकावधि ॥४८२॥

निरीक्ष्य पालयेत् क्षेत्रे भृत्यैर्वा स्वयमेव वा। अथ संप्ताप्तकाले तु दण्डानां व्रीहिसन्ततेः ॥४८३॥ 4

सुपक्वानां स्वर्णवर्णच्छुरितानामपि क्वचित्। तद्दण्डकर्तनं कार्यं शंकुलाद्यैः कृषीवलैः ॥४८४॥

अनुजीविकवर्गैश्च भृत्यैरन्यैस्तथा नराः। कर्त्तयेयुः दण्डकाण्डावलिं कलमसन्ततेः ॥४८५॥

एकदा वा प्रत्यहं वा मिथः साहय्यक्रियापरैः। कर्तनं फलदं प्राहुः यथा शाल्यादिदण्डकाः ॥४८६॥

नाशिता वा न नष्टा वा वृष्ट्याद्यैस्तस्करैस्तु वा। तथा तत्कर्तनं कार्यं सस्यानां विविधात्मनाम् ॥४८७॥

कर्तितव्रीहिदण्डानां साग्राणां तु कृषीवलैः। स्थापनं खलभूमीषु भृत्यैरनुचरादिभिः ॥४८८॥

त्रयं वा पञ्चकं तत्र दिनानां खलभूमिषु। स्थापनं रक्षणं शस्तं महाफलमुदीरितम् ॥४८९॥

श्लथाग्राणां सुपक्वानां दण्डानां व्रीहिसन्ततेः। खलभूम्यां मर्दनेन धान्यानां कणिकावलिः ॥४९०॥ ॥490॥

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पतिता राजते रत्नगुंभावलिरिवामला । पुनश्च व्रीहिदण्डाग्रे मर्दिते सति यत्नतः ॥४९१॥
वृषाणां महिषाणां च पादघट्टनकैस्तु वा । अवशिष्टो धान्यकणगुंभश्चाधःपतत्यधः ॥४९२॥ [1]
एवं संमर्दनं कृत्वा व्रीहिदण्डावलेः खले । पुञ्जीकुर्युर्धान्यकणान् घनान् सारान् पृथक्कृतान् ॥४९३॥
घनहीनान् पेशलांश्च शूर्पवातादिवीजनैः । पृथक्कृत्य प्रयत्नेन पुञ्जीकुर्युः कृषीवलाः ॥४९४॥
आतपे शोषयित्वाथ निर्मलान् कारयेद्बुधः । देवानामथ राज्ञां च भागमेकं यथाक्रमम् ॥४९५॥
श्रोत्रियायापि विदुषे भागमेकं यथाक्रमम् । दत्वा दानं भृत्यवर्गपोषणं वा क्वचित्स्थले ॥४९६॥
अवशिष्टं धान्यराशिं स्थापयेत् स्वनिकेतने । रक्षयेच्च प्रयत्नेन काठिन्यादिषु युक्तितः ॥४९७॥
मृण्मयेष्वपि भाण्डेषु सुतप्तेष्वथवा क्वचित् । दृढकाचैर्निर्मितेषु पिठरेष्वपि वा क्वचित् ॥४९८॥
दृढरज्जुकृतेष्वक्तेष्वपि देशानुसारतः । क्वचिद्भूम्यां दृढस्थल्यामवटं वा प्रकल्पयेत् ॥४९९॥
तत्र सोपानसंयुक्ते व्रीहि धान्यादिकं क्वचित् । स्थापयेद्रक्षयेद्युक्त्या जलतस्करकीरकात् ॥५००॥ ।500।
मूषकादपि दुष्टाच्च सत्वात् भयविवर्जितम् । एवं तु कलमव्रीहिधान्यानां रक्षणं परम् ॥५०१॥
बीजानामपि चैतेषामातपे शोषितात्मनाम् । रक्षणं चैवमादिष्टमुत्तमैस्तु कृषीवलैः ॥५०२॥
एवं नीते धान्यराशौ स्वग्रहाणि कृषीवलैः । सस्यव्रीह्यादिदण्डानामातपे शोषितात्मनाम् ॥५०३॥ [2]
गोपादमर्दितानां च राशिं मृदुलतन्तुकाम् । पुञ्जीकृत्य क्षुद्रमानं स्वग्रहे गोष्ठकेऽपि च ॥५०४॥ [3]
स्थापयित्वा विशेषेण पलालानां च रक्षणम् । धेनूनां वृषभाणां च महिषाणां तथा क्वचित् ॥५०५॥

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महिषीणामजानां च मृगाणामपि वा क्वचित् । पलालपूलकैरेतैः जीवनं शास्त्रनिश्चितम् ।।५०६।।

अतः सर्वत्र देशेषु धीमन्तस्तु कृषीवलाः । धान्यादिभिर्मानवानां प्राणरक्षणकर्मणि ।।५०७।।

चतुष्पात्प्राणरक्षासु सस्यकाण्डपलालकैः । महानंदाय कल्पन्ते कृतयत्ना विधानतः ।।५०८।।

आर्याणामुपदेशाच्च देशाचारक्रमादपि । तथा स्वानुभवाद्युक्त्या कृषिकर्मरता रताः ।।५०९।।

ब्राम्हणाः क्षत्रिया वैश्याः शूद्राः संकीर्णयोनयः । ये चान्ये भूसंपदस्तु फलितं धान्यराशिकम् ।।५१०।। 510

सुमुहूर्ते सुलग्ने च विन्यस्य स्वग्रहोत्तमे । पूजयित्वा धान्यलक्ष्मीं धनलक्ष्मीं तथैवच ।।५११।। 1

गन्धैः पुष्पैस्तथा शुद्दद्रव्यैः शास्त्रविनिश्चितैः । ब्राम्हणान् भोजयित्वाथ प्रदत्वा दक्षिणां शुभाम् ।।५१२।।

यशः सुखं च परममैश्वर्यं प्राप्य भूतले । तथा देवानुग्रहं च सुपुत्राश्च कलत्रकाः ।।५१३।।

पौत्रादिभिः समेताश्च हृष्टा राजन्ति नित्यशः । शालिक्षेत्रेषु विविधेष्वतः प्राप्तकृषिक्रियाः ।।५१४।।

मानवा युक्तितो देशे स्वकीये च वनान्तरे । ग्रामेष्वपि च सत्क्षेत्रे स्थल्यामपि तथा क्वचित् ।।५१५।।

सारक्षेत्रे नित्यजले द्वितीयं कृषिकर्म च । कृत्वा तत्फलमप्यत्र प्राप्नुवन्ति महोदयाः ।।५१६।।

प्रत्यब्दमेवं सर्वत्र द्विरावृत्तिकृषिक्रिया । क्षेत्रेषु बहुरूपेषु शस्यते फलदायिनी ।।५१७।। 2

अजाशकृत गोशकृत् कलतादीनां समर्पणैः । क्षेत्राणां सारमुत्पाद्य द्वितीयावृत्तिरिष्यते ।।५१८।।

क्रियाक्रिया योग्यपदा फलदा च प्रकीर्तिता । प्रत्यहं वीक्षणाच्छालिक्षेत्राणां माननादपि ।।५१९।।

कृषेश्च क्रमयोगाच्च शान्तात्मानः कृषीवलाः । धेन्वादीनां रक्षणाच्च प्राप्नुवन्त्यधिकं फलम् ।।५२०।। 520

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तस्मात् कृषिक्रमविदो मिथ्रा मैत्र्यादिभाषणाः । द्वितीयावृत्तिककृषिकार्याय कृतमानसाः ॥५२१॥ 1

प्रत्यब्दं गोरक्षणंच भृत्यानामपि रक्षणम् । बीजानां रक्षणं चापि कुल्यादीनां च रक्षणम् ॥५२२॥

जलाशयतटाकादिह्रदानामपि रक्षणम् । खनित्रशंकुलादीनां रक्षणं खलरक्षणम् ॥५२३॥

वृतेस्तु रक्षणं चापि क्षेत्राणामपि रक्षणम् । मुख्यं धर्ममिति ज्ञात्वा तथा कृत्वा प्रयत्नतः ॥५२४॥

देशाचारवशाच्चापि कृषिकर्म महोदयम् । महानन्दाय कल्पन्ते त्रिवर्ग सुखसंपदः ॥५२५॥

## १४. अथ आढकादिविविधद्रव्यप्राप्त्यर्थं कृषिक्रमादिवर्णनम् ॥

काश्यप उपदिशति -

आढकानां च माषाणां चणकानामपि क्वचित् । मुद्गानां च कुलुत्थानां तिलानां च क्वचित्स्थले ॥५२६॥

आवापरचापि बीजानां मरीचीर्चीरकादिनाम् । कृषिकर्म च कर्तव्यं व्यञ्जनं तैरुदीरितम् ॥५२७॥ 2

अन्नं तु विविधं लोके धान्योत्थैस्तण्डुलादिभिः । क्रियते प्राणरक्षार्थं तत्कल्पः पाकशास्त्रकम् ॥५२८॥

वीरसेनेन राज्ञा तु पाकशास्त्रं महत्कृतम् । तत्पुत्रेण नलेनापि गर्गेण च महर्षिणा ॥५२९॥

तत्रोक्तान्नव्यञ्जनादिक्रमस्तु विविधो मतः । तदेव व्यञ्जनं लोके यान्नाद्यानां रुचिप्रदम् ॥५३०॥ ॥530॥

माषाढकमरीच्याद्यैः लवणैश्च गुडादिर्भिः । संपाद्यते हि सर्वत्र पुष्ट्यारोग्यप्रदं नृणाम ॥५३१॥ 3

धान्योत्पादनकाले च चतुरैस्तु कृषीवलैः । वन्येष्वपि च भागेषु अपि ग्राम्येषु भूतले ॥५३२॥

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आढकानां च भाषाणां मुद्गादीनां च कालतः । सीरकृष्टेषु भागेषु स्वल्पसिक्तेषु वारिदैः ॥५३३॥ [1]

कुल्यानीरकणैर्वापि बीजावापश्च निश्चितः । आढकेष्वपि माषेषु मुद्गेष्वपि तिलेष्वपि ॥५३४॥

चणकेष्वपि शास्त्रेषु बृहल्लघु च निश्चितम् । जलसिक्ते भूमिभागे चोत्तुङ्गे तत्रतत्र तु ॥५३५॥

तिलादीनां तु बीजानामावापः कृषिचोदितः । चतुः पञ्चषसंख्येषु वासरेषु गातेषु हि ॥५३६॥ [2]

आढकाद्यङ्कुरोत्पत्तिः दृश्या सीरस्थले तदा । सा च भूसारयोगेन निश्चिता शास्त्रकोविदैः ॥५३७॥

प्रत्यक्षमालोकिता च नानादेशेष्वपि स्थले । व्रीहि क्षेत्रं तु भूलोके जलभूमिरितीरितम् ॥५३८॥

माषादिक्षेत्रभूमिस्तु तारभूमिरिति स्मृता । तस्मादाढकमाषादिकृषिकर्म कृषीवलैः ॥५३९॥

तारक्षेत्रेषु कर्तव्यमिति प्रोवाच भार्गवः । शिष्टाचारक्रमवशात् सौकर्याद्वा तलस्थितेः ॥५४०॥ ॥540॥

व्रीहिक्षेत्रेषु माषादिबीजावापः क्वचित्स्थले । फलप्रदश्च निर्दिष्टः शास्त्रेऽस्मिन्नपि काश्यपे ॥५४१॥

यथादेशाचारवशात् स्थलकालवशात्तु वा । जलभूमिक्षेत्रभागे तारभूक्षेत्रकेऽपि वा ॥५४२॥

सीरकृष्टे यथाकालं प्रायः समतले तथा । बृहदाढकबीजानि माषबीजानि वा तथा ॥५४३॥

मुद्गबीजानि चणकतिलगोधूमबीजकम् । कुलुत्थबीजानि तथा कीरबीजं च कोद्रवम् ॥५४४॥

बीजानि यवराणां च मरीचीबीजकान्यपि । तूलेरंढकबीजानि जीरकाणां च बीजकम् ॥५४५॥

बीजानि सर्षपादीनां तारक्षेत्रस्थलेषु वा । वापयेयुर्यथाकालं पङ्क्तिशः पङ्क्तिशः क्रमात् ॥५४६॥

सीताश्रेणीषु वा नानारेखाश्रेणीषु वा पुनः । जलसिक्तानि बीजानि कानिचित्कृषिकोविदाः ॥५४७॥

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असिक्तां च जले तद्वत् कांश्च सद्बीजकावलिम् । वापयेयुर्यथाकालं स्वदेशाचारवैभवात् ॥५४८॥

उप्त नामेव भूभागे द्विविधे तत्रतत्र तु । बीजानामङ्कुरोत्पत्तिमालोक्य कृषिकारिणः ॥५४९॥ 1

एकमासेन वा किंचिन्न्यूनाधिक्य क्रमान्विते । काले तले तु सर्वत्र प्रचुराणि तृणानि हि ॥५५०॥ 550

कृषीवलास्तानि वीक्ष्य करशंकुलकादिभिः । छित्वा भित्वा समूलंचबहिरुध्दृत्य तत्स्थलात् ॥५५१॥

तृणादीनि ततस्तत्र जलसेचनमाचरेत् । बीजावापानन्तरं तु चाढकादिस्थले भुवि ॥५५२॥

वृष्ट्याधिक्यं यदि तदा बीजनाशो भवेध्द्रुवम् । अतः स्वल्पं जलकणावलिसेचनमुत्तमम् ॥५५३॥

कुल्यानीरेण वा चैतत् कल्प्यंमाहुर्मुनीश्वराः । तिलगोधूमचणकमाषमुद्गाढकावलेः ॥५५४॥ 2

बीजानां नाशजनके सन्निरस्ते तृणादिके । तदा शाखोपशाखानां अङ्कुरादङ्कुरान्तरम् ॥५५५॥

मूले पुष्कलसारं च कलयेत् कलमादिवत् । अतस्तृणानां कन्दानां शत्रूणां निवहे हते ॥५५६॥

माषादिदण्डशाखादिवर्धनं किल निश्चितम् । तदानिमेव शोभादिः पुष्पादिश्च मनोहरः ॥५५७॥ 3

पुष्पोद्भवानन्तरं तु कणिशानां च सन्ततिः । कपिशोष्वाढकादीनामुत्पत्तिश्च विलोकिता ॥५५८॥

मासत्रयेण कालेन कुचित् तदधिकेन वा । माषाढकादिचणक गोधूमोत्पत्तिरीरिता ॥५५९॥

मूलस्थले तु सलिलसेकवैभवतो भुवि । अन्तः सारो भवत्येव कपिशानामितीरितः ॥५६०॥ ॥560॥

एवं माषाढकंतिलप्रादुर्भावस्तु भूतले । सर्वत्र दैवयोगेन निर्मितः शास्त्रदर्शितः ॥५६१॥

अन्तसारे घनीभूते माषादिश्रेणिका क्रमात् । फलाय दृष्टः सर्वत्र पङ्क्तिशा कणिशांचले ॥५६२॥ 4, 5, 6

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तदा पत्रादिपतनं जीर्णता पतनं तथा। शिरस्तलानां नमनं निर्दिष्टं कृषिकोविदैः ॥५६३॥
कालानुगुणमेवं तु जलसेचनमाचरेत्। तिलानामपि गोधूमराशीनां तारभूमिके ॥५६४॥
कणिशादिप्रवेशश्च कालभेदश्च निश्चितः। जातिभेदो रूपभेदः कृषिभेदस्तथा क्वचित् ॥५६५॥
विज्ञेयः स्थलभेदेन कृषियोग्या तदर्हका। आढकादिघनीभूते कणिशानां गणे तथा॥५६६॥
सुपक्वे क्षेत्रभागेषु तत्कृन्तनमुदीरितम्। भृत्यैर्वीरैः रक्षकैश्च फलकाले तु रक्षणम्॥५६७॥
महाफलाय भवति धान्यादि वदिहोदितम्। छिन्नानां त्रुटितानां च कणिशानां खलस्थले॥५६८॥
दण्डाद्यैर्मर्दनं प्रोक्तमातपै शोषणं तथा। आढकीदण्ड काण्डादीन् वृषाश्वादिचतुष्पदाम्॥५६९॥ 1
भक्षणार्थमिहादिष्टान् रक्षेयुश्च कृषीवलाः। पुञ्जीकृत्य खलस्थाने स्वग्रहेस्वोचितस्थले॥५७०॥ ॥570॥ 2
गोष्ठचत्वरभागेषु चाथवा स्थलयोग्यकम्। आढकीदण्डकाण्डादिरक्षणं च सुखप्रदम्॥५७१॥ 3
व्रीहिदण्डपलालादीन् आढकीदण्ड काण्डकान्। माषगोधूमचणकपत्रदण्डादिकानपि॥५७२॥
चतुष्पाज्जीवदान् पुर्ष्टिप्रदानपि च सर्वथा। सर्वर्तुष्वपि पश्वादेरारोग्यसुखदायकान् ॥५७३॥ 4
पुञ्जीकुर्याच्च रक्षेच्च कार्यज्ञस्तु कृषीवलः। क्षुद्रग्रामकटुग्रेवविहीनान् तु कृषीवलः॥५७४॥ 5
शूर्पादिविन्यासयोगात् वातवीजनतोऽपि वा। पेचनाच्चामनाद्वापि निर्मलीकृतरूपकान्॥५७५॥ 6,7
गोधूमतिलमाषादीन् आढकीसर्षपादिकान्। कीरान् मुद्रानथान्यांश्च पुञ्जीकुर्यात् खलस्थले॥५७६॥ 8
स्वग्रहं चानयेदेतान् आतपे शोषितान् तथा। निर्मलीकृतदेहांश्च चणकाढकमुद्गकान् ॥५७७॥

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व्यञ्जनाय तथा सज्जान् भाण्डेषु च पृथक्पृथक् । स्थापयेद्रक्षयेत् काले सुखसिद्दयै कृषीवलः ॥५७८॥ 1

धान्यादीनाढकादींश्च मरीच्यादीन् भुवः स्थले । देशाचारवशादेवं युक्त्या च कृषिकोविदाः ॥५७९॥ 2

तत्तज्जातिस्वरुपानुगुणं च स्थलयोग्यकम् । कालानुगुणमन्यांश्च कृषिलभ्यान् विशेषत ॥५८०॥ ॥580॥ 3 4

संपादयेयुः ग्रामेषु पुरेषु नगरेष्वपि । तदन्तिकस्थले क्षेत्रभागेषु विविधेष्वपि ॥५८१॥

कृष्यादानं तु नियमात् महाफलमुदीरितम् । जलभूमौ तथा तारभूमौ वा कृषियोग्यकाः ॥५८२॥

प्रतिदेशं प्रतिग्रामं कोद्रवं यवरं तथा । यवं च वर्धयेत् काले तद्धान्यमपि पुष्टिदम् ॥५८३॥

तत्काण्डदण्डः पश्वादिजीवानां जीवनप्रदः । अतः सर्वेषु देशेषु कोद्रवं यवरं वरम् ॥५८४॥

पुष्टिप्रदं महासारं वर्धयित्वा विशेषतः । अगस्त्यमिक्षुदण्डांश्च स्थलयोग्यं च वर्धयेत् ॥५८५॥

महाफलप्रदं चेक्षुकृषिकर्म प्रशस्यते । गजानां परमाधारं शर्करागुडकारणम् ॥५८६॥

इक्षुदण्डं दृढं कालवर्धनम् जलभूमिषु । अथवा तारभूभागे क्वचित् क्षेत्रे विशेषतः ॥५८७॥

दीर्घावटश्रेणिकं तु कृत्वा तत्र निखातयेत् । कदलीनां च सर्वत्र पुण्ड्रेक्षूणामिह क्षितौ ॥५८८॥

न बीजकलनं दृष्टं प्रत्यक्षं वापि शास्त्रतः । शरत्काले तथान्यत्र समये देशचोदिते ॥५८९॥

कृषीवलैरिक्षुदण्डस्थापनं चावटस्थले । स्थापनं सलिलासेकपूरणं च क्रमोदितम् ॥५९०॥ ॥590॥

गते दशदिने काले तन्मूलादंकुरोभ्दवः । इक्षुदण्डाङ्कुरवशात् दलादीनाम थोद्गमः ॥५९१॥ 5

मासद्वयेन वा मासत्रयेणापि क्वचित्स्थले । संपूर्णदलवृद्धिस्तु निश्चिता फलदायिनी ॥५९२॥

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पुरुषाकृतिकौन्नत्यमधिकोन्नतिरेव वा । इक्षुदण्डावलीवृद्धिं ज्ञात्वा कृषिविचक्षणः ॥५९३॥
तन्मूले यावटे भागे नित्यं सलिलसेचनम् । कल्पयेद्यत्नतः काले रक्षयेच्च विशेषतः ॥५९४॥
वातादिभिस्तथा चैषामिक्षूणां रक्षणं परम् । एवं प्रकारः कथितः कदलीनामिह क्षितौ ॥५९५॥
कदली फलदा शश्वत् तज्जातिर्विविधा मता । देशाचारवशात्कालयोगाच्च कृषिकोविदाः ॥५९६॥
कदलीमिक्षुकाण्डं च सर्वर्तुष्वपि वर्धयेत् । सततं फलदं प्रोक्तमेतत्सर्वत्र देशके ॥५९७॥
क्वचित् पर्वतसानौ वा गिरिमूर्धनि वा क्वचित् । कठिनस्थलके भूमिसारं ज्ञात्वा विचक्षणः ॥५९८॥
कदलीमिक्षुकाण्डं च वर्धयेत्सुखसिद्धये । सततं फलदं प्रोक्तमेतत्सर्वत्र भुमिषु ॥५९९॥ [1]
न तूषरस्थले भूमिदोषदुष्टे तु वर्धयेत् । अतः सल्लक्षणोपेते भूभागे तु विचक्षणः ॥६००॥ ॥६००॥
सूपप्रधानान् चाणकाढकमुद्गादिमान् क्वचित् । वर्धयेद्रक्षयेत्तत्र फलितान् स्वगृहं नयेत् ॥६०१॥ [2]
पिचुवृक्षं तूलवृक्ष तथा तच्छ्रेणिकामपि । कार्पासवस्त्रसिद्ध्यर्थं तारभूमौ क्वचित्स्थले ॥६०२॥
तथोष्णस्थलके चैव वर्धयेस्तु कृषीवलः । यत्सुखप्रदमादिष्टं पारंपर्योपदेशतः ॥६०३॥ [3]
साक्षाद्वीक्षणतो वापि तत्सर्वं वर्धयेत्कृती । खलभूमितटे वापि ग्रामान्ते ग्रामसीमनि ॥६०४॥
आक्रीडान्तः स्थले वापि स्थले समुचिते तथा । जलाशयतटप्रान्ते चोत्तुङ्गे ग्रामवास्तुके ॥६०५॥
कार्पासवृक्षवृद्धिश्च तथान्यद्वर्धनं क्रमात् । शस्तमित्यवमादिष्टं शास्त्रज्ञैर्मुनिपुङ्गवे ॥६०६॥ [4]

इति कात्यपीयकृषिसूक्तौ धान्यादिकृषिक्रमकथनं नाम प्रथमो भागः ॥ [5]

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## अथ शाकादिकृषिक्रमकथनं नाम द्वितीयो भागः ॥

काश्यप उपदिशति -

कृषिकार्यक्रमविदो लोके सर्वत्र भूमिषु। सल्लक्षणैर्भूसुरासु नृपाज्ञावर्तिनः सदा ॥१॥

शालिक्षेत्रे यथाकालं शाल्यादीन् कलयेत् क्रमात्। तारक्षेत्रेषु तद्वच्च चणकादींश्च[1] वर्धयेत् ॥२॥

एतेन भोजनोपायः समग्रः परिकल्पितः। शालितण्डुलवर्गैश्च संभारद्रव्यकैस्तथा ॥३॥

आढकाद्यैश्च तत्पूर्तिः नैव दृष्टः[2] क्षमातले। अतः शाकादिकान् स्वादुरसान् तत्र विवर्धयेत् ॥४॥

जटिकान् राशिजटिकान् वल्लिका वनवल्लिकाः। पटोलिकांश्च वार्ताकान् षवकांश्चं तथैव च ॥५॥

शाकांश्च विविधान् तद्वत् कूश्माण्डांश्च कलाटकान्। कुस्तुंबुरुन् कलाटांश्च सूरणान् शाकुटांस्तथा॥६॥

हरिद्राश्चापि शुण्ठीश्च स्थलवन्यप्रभेदकान्। स्थलीभवांश्च विविधान् रसपूर्णान् कृषीवलान् ॥७॥

कृषिक्रमाद्वर्धयेयुः भोज्यकार्यार्थसिद्धये। एतानि शाकद्रव्याणि मुख्यानीति मतिर्मम ॥८॥

क्वचिद्देशेषु शाकादिः जातिरूप[3]प्रभेदतः। रसतो वर्णतश्चैव भिन्नः संपरिकीर्तितः ॥९॥

पलाण्डुं वर्धयेत् द्राक्षानलदैलादिवर्धनम्। कृषीवलैस्तु कर्तव्यं तत्र तत्र स्थलीष्वपि॥१०॥ ॥10॥

तारभूमितले वापि जलभूमितलेऽपि वा। ऋतुयोग्यं देशयोग्यं पारंपर्यक्रमोद्भवम् ॥११॥

रीतिं च विज्ञाय बुधः शाकद्रव्यं विवर्धयेत्। प्रथमं तण्डुलद्रव्यं सूपद्रव्यं द्वितीयकम् ॥१२॥

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शाकद्रव्यं तृतीयं स्यात् कृष्यादानक्रमोद्भवम् । घृतक्षीरदधिद्रव्यं चतुर्थं च समीरितम् ॥१३॥

एतच्चतुर्विधं द्रव्यं भोज्यकल्पःप्रकीर्तितः । सर्वेषामिह देवानामेतत् प्रीतिविवर्धनम् ॥१४॥

मनुष्याणां तु सर्वेषां जीवनस्थैर्यकारणम् । पुष्टिदं चारोग्यदं च बुद्ध्यायुर्वर्धनं तथा ॥१५॥

सृष्टिकाले ब्रम्हणा तु सृष्टः सर्वत्र भुमिषु । अनेन भोज्यकल्पेन वसुधा तु सजीवना ॥१६॥

ब्रम्हणः सृष्टिसाफल्यमभवच्च तदादितः । सर्वेष्वपि देशेषु क्षेत्रेषु विविधेष्विह ॥१७॥

मुनीश्वराणां यमिनां मनुष्याणां च सर्वत्रः[1] । त्रिवर्गफलदश्चायं भोज्यकल्पः प्रकीर्तितः ॥१८॥

तस्माच्छाकद्रव्यकादिकृषिश्चापि कृषीवलैः । कल्पनीया विशेषेण ग्रामेषु नगरेष्वपि ॥१९॥

वने वनान्तरे वापि सल्लक्षणसमन्विते । जनावासान्तिकस्थाने जलाधारे विशेषतः॥२०॥ ॥२०॥

शाकादिकृषिकार्यं च फलदं च विनिश्चितम् ।वसन्तकाले ग्रीष्मे वा हेमन्ते वापि वा क्वचित् ॥२१॥

वार्ताकवल्लीजटिकमरीचीषवकादिभिः॥ सीरकृष्टं क्षेत्रतलमञ्चयेदङ्कुरार्थिभिः ॥२२॥

वार्ताकादीनि बीजानि चातपे शोषितानि तु । गोशकृत्कादिभिः सारमेदुरे भूतले क्वचित् ॥२३॥

अङ्कुरार्थं विन्यसेयुः जलसेकं च कोविदाः । यथाक्रमं कारयेयुः पलालाच्छादनं ततः ॥२४॥

एवं दिनत्रये काले गलिते त्वङ्कुरस्थले । अङ्कुराणां दर्शनं तु क्रियते विधिना किल ॥२५॥

दिनविंशतिके काले दृढमङ्कुरजालकम् । सीरकृष्टे स्थले योग्यं योत्खात्वा स्थापयेत् बुधः ॥२६॥

तदानीमेव मूले तु जलसेकस्तु जीवदः । आलवालक्रमस्थाने वार्ताकादींस्तु वर्धयेत ॥२७॥

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पटोलिकां वल्लिकां च लतारूपप्रवर्धिनीम् । वर्धयेद् वल्लिकावृद्धये कायमानस्वरूपके ॥२८॥ [1] [2]

ग्रीष्मकाले जलक्षेत्रे वर्षाकालं विना बुधः । कालान्तरेष्वपि तथा शाकद्रव्यकृषिः शुभा ॥२९॥

शाकुटानां तु कन्दं च सूरणानां च कन्दकम् । हरिद्राकन्दकं चैवमावाले वा प्रकल्पयेत् ॥३०॥ ॥30॥

स्थले वा चोष्णभूम्यास्तु कृषिकर्मफलप्रदम् । इत्थं लतारूपकाणां कृषिश्च विविधा मता ॥३१॥ [3]

कूश्माण्डं वनकूश्माण्डं एलानलदमुख्यकान् । वर्धयेत्तारभूभागे नागवल्लीमपि क्वचित् ॥३२॥

कदलीमिक्षुदण्डं च नागवल्लीं च पूगिकाम् । जलक्षेत्रे तथोद्याने चाक्रीडे वर्धयेद्बुध ॥३३॥ [4]

रम्भां च मोचां फलदां पनसं लिकुचं तथा । रसालमाम्रं च तथा जम्बूमपि च वर्धयेत् ॥३४॥

नारिकेलतरूंश्चापि पालयेत् कृषिकर्मवित् । गृहाणां निष्कुटे वापि चारामे वा क्वचित्स्थले ॥३५॥

तारभूमिस्थले वापि जलभूमितले क्वचित् । यथास्थलप्राप्तिलोके ब्राम्हणाः क्षत्रियास्तथा ॥३६॥

वैश्याश्च शूद्राः संकीर्णजातिजा अपि मानवाः । व्याधादयश्च वीराश्च यथाशक्ति स्वभूमिके ॥३७॥

धान्याकं सूरणं वल्लीं कूष्माण्डं च पटोलिकाम् । वर्धयेत् शास्त्रनिर्दिष्टान् जटिलादीन् यथाक्रमम् ॥३८॥

प्राथमं भूकर्षणं तु द्वितीयं गोशकृत्कणम् । तत्र क्षिपेश्च भूसारकलनार्थमिदं विदुः ॥३९॥

तत्र क्षेत्रे बहुमुखमालवालप्रकल्पनम् । आलवालं चलस्थाने वार्ताकादिनिवेशनम् ॥४०॥ ॥40॥

मालतीकुन्दचाम्पेयकुटजादिस्थलेष्वपि । आलवालं बहुमुखं कल्पयेत्स्थलयोग्यकम् ॥४१॥

आलवालाञ्चले बीजस्थापनं वाङ्कुरार्पणम् । देशाचारवशात्कालयोगादेवं प्रकल्पयेत् ॥४२॥

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ततो गते मासकाले वार्ताकादेस्तु मूलतः । तृणादिवैरिसंघस्य निरासश्च प्रकीर्तितः ॥४३॥
दिनपञ्चककालं वा दिनषट्कमथापि वा । वार्ताकादेस्तु मूलेषु चालवालमुखात् बुधः ॥४४॥
जलानां सेचनं कुर्यात् ग्रीष्मकाले विशेषतः । मुहुर्मुहुस्तोयदानं तृणकोष्ठ निरासकः ॥४५॥
महाफलाय निर्दिष्टमृषिभिः शास्त्रकोविदैः । शाकादिपत्रजालेषु वार्ताकानां तथा क्वचित् ॥४६॥
पटोलिकानां वल्लीनां षवकानां तथैव च । कूश्माण्डानां कलाटानां सूरणानां तथैव च ॥४७॥
शाकुटानां हरिद्राणामार्द्रकाणामपि क्वचित् । पत्रजालेषु कीटादिभक्षणं दृश्यते नरैः ॥४८॥
अतस्तत्कीटदोषादिनिरासार्थं कृषीवलाः । भस्मधूली क्षेपणं वा सुधासन्लिलसेचनम् ॥४९॥
कारयेत् क्रमतः काले देशाचारवशात्तथा । बीजानां स्थापने चापि तृणादिक्षेपणे तथा ॥५०॥ ॥50॥
लतादि पालने चापि पुष्पाविर्भावकालिकम् । यत्कर्म निश्चितं लोके क्रियते कार्यकोविदैः ॥५१॥
स्वयं निरीक्ष्य तत्सर्वं पारंपर्योपदेशतः । पटोलिकासु वार्ताक कूश्माण्डादिषु भूतले ॥५२॥
जंबीरलिकुचादीनामेलाद्राक्षादिकेष्वपि । द्राक्षाखर्जूरिकादीनां कृष्यादिषु सुबुद्धयः ॥५३॥
देशाचारं क्रमप्राप्तमृतुयोग्यं कृषिक्रियाम् । कलयेयुः भोज्यखाद्य स्वाद्यादिसुखहेतवे ॥५४॥
तेषु केचित् पत्ररुपाः सुरसाः परिकीर्तिताः । परे तु पुष्परुपाः स्युरन्ये तु फलरूपिकाः ॥५५॥ 1
अन्ये लवकरुपाः स्युरित्तरे कन्दरूपकाः । पुष्पोदये पुष्पमध्ये पुष्पनाशे तथा क्रमात् ॥५६॥ 2
केचित् खाद्याश्च पेयाश्च कदल्यां तु विशेषतः । कदलीकन्दकाण्डं च पुष्पं लवकमेव च ॥५७॥

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फलं च कन्दकं वापि स्वादु रुच्यं च सर्वदा। भोज्यं निर्दिष्टमेतत्तु मुनिभिस्तत्त्वदर्शिभिः ॥५८॥
पटोलिकानां लवकं वार्ताकानां तथैव च। शाकानां षवकानां च बाल्ये स्वादुतरो रसः ॥५९॥
अतो लवकमेतेषां प्रशस्तं परिकीर्तितम्। पनसानां रसालानां कूश्माण्डानामपि क्वचित् ॥६०॥ ॥60॥
लवकं मध्यवयसि रसः स्वादुतरा मतः। इक्षूणां नारिकेलानां लिकुचानां तथैव च ॥६१॥
रसालप्रमुखादीनामन्त्ये वयसि भूतले। तेमनादिक्रियायोग्यरसस्तत्र निरुपितः ॥६२॥ 1
एवं स्वदेशाचरणं स्वस्वजातिक्रमादपि। यदुक्तं पाकशास्त्रेषु कालद्रव्यादियोगतः ॥६३॥
स्वशरीरस्थपित्तादिगुणदोषवशादपि। कृषिक्रमविदो लोके पटोलादिकृषिं तथा ॥६४॥
रक्षयेयुः गृहे क्षेत्रे चाक्रीडे स्वीयभूतले। केदारेष्वपि वा वापीहृदादीनां तटेष्वपि ॥६५॥
जलाशयस्याधस्थात्तु तन्मुखे वा विशेषतः। कदलीपूगपुंनागनारिकेलाम्रवृक्षकान् ॥६६॥
पनसैलाद्राक्षकादीन् मालत्यादीन् विशेषतः। वर्धयेद्वार्ताकवल्लीकूश्माण्डानपि युक्तितः ॥६७॥
नानाशाकान् तथा पेयान् खाद्यान् चर्व्यानपि क्वचित्। कृष्यादानक्रमवशात् रक्षयेत् पालयेदपि ॥६८॥
देशेदेशे च सर्वत्र वसन्ते ग्रीष्मकेऽपि च। वर्षाकाले शरत्काले हैमन्ते चापि वा क्वचित् ॥६९॥
शिशिरेऽपि स्वकीयेषु क्षेत्रेषु विविधेष्वपि। प्रकृत्वा चालवालादीन् तत्तत्कालानुरुपतः ॥७०॥ ॥70॥ 2
शाकं पत्रं त्वचं पुष्पं कन्दं वा रसमेदुरम्। आरोग्य पुष्टिजनकं कृष्यादानवशाद्भुवि ॥७१॥
पालयेयुः कृषिविदः गृह्णीयुः फलमुत्तमम्। एलालवङ्गार्द्रकादीन् पूगान् ताम्बूलवल्लिकाः ॥७२॥



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इक्षुकाण्डांश्च कदलीरन्याश्च विविधा लताः। केदाराञ्चलभागेषु तारभूभागिकेऽपि वा ॥७३॥

जनोपकारकानन्यान् पिप्पलीप्रमुखानपि। नानाविधाश्चोषधीनां लताश्च प्राणवर्धकाः ॥७४॥

वर्धयेयुर्विशेषेण तत्तत्क्षेत्रानुरूपतः। यथाकालं यथाचारं पूर्वसूर्युपदेशतः ॥७५॥ [1]

कृषिसाध्यं प्राणिवर्गसुखदं यन्निरूपितम्। शास्त्रेषु मुनिभिः पूर्वैः तत्सर्वं तु कृषीवलाः ॥७६॥ [2]

युक्त्या स्वस्वक्षेत्रभागे वर्धयेयुः प्रयत्नतः। स्वीयस्वीयकुटुम्बानां रक्षार्थं ब्राम्हणैरपि ॥७७॥

प्रीत्यर्थमपि देवानां क्षत्रियैर्वैश्यकैरपि। शूद्रैरन्यैश्च भूलोके कल्प्या कृषिरुदीरिता ॥७८॥

शास्त्रेष्वपि निबध्दा च मुनिभिस्तत्त्वदर्शिभिः। सृष्टिकर्त्रा ब्रम्हणा तु कल्पादौ विविधानि तु ॥७९॥

बीजानि सृष्टानि भुवि धृतान्यथ विशेषतः। भूमिदेव्या प्रजासृष्टिप्रार्थनापूरणाय हि ॥८०॥ ॥४०॥ [3]

एकं बीजं तु बहुधा रूपभाक् च भविष्यति। बहुधा फलदं नृणां भविष्यति न संशयः ॥८१॥ [4] [5] [6]

इति भूम्या विष्णुपत्न्या पूर्वमुक्तं च तच्छ्रुतम्। कृषिशास्त्रं तु भूम्योक्तं नीतं तन्मुनिभिः क्षितिम् ॥८२॥

तच्च संरक्षितं भूपैः लोकरक्षाधुरंधरैः। अधीतं तच्च कालेन शूद्रकैस्तु विशेषतः ॥८३॥

तदादि बहुधा शास्त्रं कृष्याख्यं भूनिवासिभिः। पर्जन्यकालानुगुणं विस्तृतं रक्षितं च तत् ॥८४॥

एवं कालेन महता नानादेशेषु मानवैः। प्रत्येकं कृषिशास्त्रं तु चाधीतं भक्तिपूर्वकम् ॥८५॥

कृषिश्च कलिता स्वीये क्षेत्रे केदारकेऽपि च। फलं च लब्धं संपूर्णं पोषिता जीवराशयः ॥८६॥

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स्वप्रजाश्च विशेषेण देवभूपालसाह्यतः । अतः सर्वत्र देशेषु कृषिकर्मणि भूमिपैः ॥८७॥
उत्तमं साह्यमादिष्टं मुनिभिः कथितं पुरा । विना राज्ञां तु साह्येन कृषिर्भूमण्डले तथा ॥८८॥
देशे वा नगरे ग्रामे न संपूर्ण फलेरिता । प्रत्यक्षतश्च दृष्टं च प्रजाभिर्भृत्यकैरपि ॥८९॥
अतः सर्वत्र भूपालैः कृषिसाह्यं महाफलम् । कर्तव्यं मण्डलानां च राष्ट्राणां क्षेमसिद्धये ॥९०॥ ॥90॥
स्वात्मक्षेमादिवृद्ध्यर्थं यशसे च पराय च । देवानां प्रीतये चापि स्वधर्मस्थैर्यहेतवे ॥९१॥
विप्रेभ्य श्रोत्रियेभ्यश्च नानागोत्रेभ्य एव च । भूदानं गोप्रदानं च कुल्याखननमेव च ॥९२॥
कृषिकर्मण्यशक्तानां विप्राणां च विशामपि । शूद्राणामपि चान्येषां हितायानेकरूपकम् ॥९३॥
कृषिसाह्यं तु कर्तव्यं राजधर्मानुसारतः । वापीकूपतटाकानां ह्रदानां खननं तथा ॥९४॥
जलाशयानां च तथा घटीयन्त्रप्रकल्पनम् । सस्यविध्वंसकानां तु तस्कराणामनेकधा ॥९५॥
दण्डश्च शुद्धसत्त्वानां यशसे धर्मसिद्धये । एवं बहुविधं साह्यं कृषिकर्मणि निश्चितम् ॥९६॥
तत्सर्वं भूमिपालैस्तु कर्तव्यं मुनिभाषितम् । यस्मिन् ग्रामे नगर्यां वा देशे वाथ क्वचित्स्थले ॥९७॥
कृषिकर्मण्यशक्तानां प्रजानाम् रक्षणाय च । जनबाहुल्यनगरराजधान्यादिवास्तुके ॥९८॥
उपकाराय वा भूपाः सारक्षेत्राण्यनेकधा । क्षेत्राणां मण्डलं वापि द्विविधानां महीतले ॥९९॥
स्वीकृत्य कृषिकार्यार्थं यथाकालं यथाक्रमम् । नियोजयेयुः स्वान् भृत्यान् प्रजाश्चापि विशेषतः ॥१००॥ 100
संकीर्णजातिजान् रिक्तान् शूद्रांश्चापि कृषिस्थले । योजयित्वा तत्रतत्र धान्यादीन् विविधानपि ॥१०१॥

आढकादीनपि तथा शाकादींश्च क्वचित्स्थले। मल्लीचम्पकमुख्यानि कुसुमान्यपि युक्तितः ॥१०२॥
अमितं वर्धयेयुः स्वप्रजाक्षेमाभिवृद्धये। शाकादिद्रव्यराशिं च धान्यादीनां च राशिकम् ॥१०३॥
आढकीचणकादीनां राशिं च तिलराशिकम्। माषसर्षपराशिं च तथा द्राक्षादिपुञ्जकम् ॥१०४॥
विविधानां फलानां च पुञ्जं च समयोद्भवम्। सज्जीकृत्य नराणां हि सुखाय स्थापयेन्नृपः॥१०५॥
आपणस्थानके वापि तदर्थं निर्मिते स्थले। सचत्वरे साङ्गणे वा निरावरणकेऽपि वा ॥१०६॥
निषद्यासु तथा शालानिर्माणेष्वपि वा क्वचित्। सर्वं द्रव्यं च पूर्वोक्तं यच्चान्यत्सुखदायकम् ॥१०७॥
कम्बलं वस्त्रजालं च दधिक्षीरादिकं तथा। भोज्यद्रव्यं च विविधं चर्व्यं खाद्यं च यम्दुवि ॥१०८॥
कृष्यादानवशात्प्राप्यं गुडं तैलं हितप्रदम्। यच्चान्यत् द्रव्यमत्रोक्तं तत्सर्वं भूमिवल्लभः॥१०९॥
ग्रामे पुरे च नगरे राजधान्यां विशेषतः। निषद्यादिस्थानकेषु यानीयात्तु क्रियार्हकम्॥११०॥॥110॥
स्थापयित्वा विशेषेण वैश्यान् वाणिज्यकोविदान्। क्रयार्थं विक्रयार्थं च योजयेत् धनिकान् नृपः॥१११॥
वसन्तादिषु मासेषु यद्यत् प्राप्यं कृषिक्रमात्। यन्त्रादिभिश्च यत्प्राप्यं यत् प्राप्यं तन्तुवायकान्॥११२॥ [1]
तैलकाराच्च यत् प्राप्यं तत्सर्वं पृथिवीपतिः। मालाकाराच्च यत प्राप्यं गन्धद्रव्यादिकं भुवि॥११३॥
संपादयित्वा तत्सर्वं प्रजानां सुखसिद्धये। ग्रामे पुरे च नगरे राजधान्यां विशेषतः ॥११४॥
आपणादिषु शालासु चाङ्गणे विविधेऽपि च। स्थापयेत् रक्षयेत् राजा वैश्यान् तत्र नियोजितान्॥११५॥
प्रस्थं च कुञ्जं द्रोणं च नाडिकं क्षुद्रमेव च। धान्याढकादिद्रव्याणां कलनार्थं प्रकल्पयेत् ॥११६॥

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अयः पट्टैः सारदारुफलकाभिर्महीपतिः। प्रस्थादिकं कारयेच्च देशे सर्वत्र योजयेत् ॥११७॥
तैलादितोलनार्थं च पलंकारं तथैव च। अयःखण्डेन क्लृप्तं च सर्वत्र सममानकम् ॥११८॥
तुल्यरूपं तुल्यदरं देशे तत्र नियोजयेत्। तत्प्रमाणं च वैश्येषु ग्राम्येष्वपि जनेषु च ॥११९॥ 1
निवेदयेत् भृत्यवर्गैः ब्राम्हणाद्यैर्विशेषतः। तुलादण्डं च कांस्यं वा पित्तलं वा विशेषतः ॥१२०॥ ॥120॥
शाकादितोलनार्थं च राजा सर्वत्र योजयेत्। अमात्यप्रमुखे राजा पलं प्रस्थादिकं क्रमात् ॥१२१॥
अङ्कयित्वा विशेषेण देशे सर्वत्र योजयेत्। धान्यादीनां क्रियज्ञानं पणज्ञानं तथा नृपः ॥१२२॥ 2
उद्घोषयेच्च सर्वत्र देशेदेशे विशेषतः। प्रतिग्रामं प्रतिगृहं प्रजासौख्याय युक्तितः ॥१२३॥ 3
धान्यादिद्रव्यराशिनां तैलादीनां तथैव च। वस्त्रादीनां च शाकादिद्रव्याणां च कृषिक्रमे ॥१२४॥ 4
यत्साह्यं विविधं शास्त्रनिर्दिष्टं मुनिभिः पुरा। तत्सर्वं पृथिवीपालः कल्पयेत् क्षेमसिद्धये ॥१२५॥
कृषिं विना न भूलोके द्विपदां च चतुष्पदाम्। सुखादिर्न भवेदेव निश्चितं शास्त्रपारगैः ॥१२६॥
तस्मात् देवप्रीणनार्थं प्रजानां रक्षणाय च। कृषिकर्मण्युपरतिः नृपाधीना च निश्चिता ॥१२७॥
पुरोहितैः ब्राम्हणैश्च सचिवैर्वा विशेषतः। महीपतिः क्षत्रियो वा प्रजारक्षा धुरंधरः ॥१२८॥
सर्वकार्येषूत्तमं तु कृषिकर्म प्रशस्यते। तत्पालयेत् स्वदेशेषु यत्नतो युक्तितः क्रमात् ॥१२९॥
एवं महीपतिर्युक्त्या ग्रामे वा नगरेऽपि वा। राजधान्यां विशेषेण निष्कुटं वनमेव वा ॥१३०॥ ॥130॥
पुरस्य च बहिर्देशे मध्ये वा वृक्षवाटिकाम्। अन्तः पुरस्थप्रपदालीलार्थं वा विशेषतः ॥१३१॥ 5

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आरामं स्थापयेत् धीनाम् वनान्ते वृक्षवाटिकाम् ।सारणां चन्दनादीनां वृक्षाणां वर्धनार्दपि ॥१३२॥ 1

ग्रहनिर्माणसाहयं च प्रजानां परिकल्पयेत् । प्रासादोद्यानभागेषु मनोज्ञान् फलमेदुरान् ॥१३३॥ 2

वृक्षांस्तु विविधान् भूपो वर्धयेयुर्यथाक्रमम् । रम्भां च मोचां जंबीरं मातुलुंगां च पिप्पलीम् ॥१३४॥ 3/4

अन्याश्चोषधिवल्लीश्च नलदानपि वर्धयेत् ।कुशान् काशांश्च विविधान् तुलसीर्बिल्वकानपि ॥१३५॥

कुसुमानि च पूजार्हान्यनेकानि च भूमिपः ।काललभ्यानि गन्धादयानपि सर्वत्र वर्धयेत् ॥१३६॥

कुटुम्बारोग्यदायीनि युक्त्यान्यानि च वर्धयेत् । देवोद्यानं देवभूमावुत्सवाय प्रकल्पयेत् ॥१३७॥

ग्रामस्यान्तःस्थले वापि बहिर्वा तत्प्राकल्पयेत् । यथा स्थलंवशाद्भूपो देशाचारवशादपि ॥१३८॥

एवं प्रासादभूम्यां तु प्रमदावनमुत्तमम् । मनोज्ञवृक्षषण्डाढ्यं मालत्यादिविराजितम् ॥१३९॥

स्थापयेदेवमन्यत्र राजधान्या बहिःस्थले । तच्च भूपः स्थापयेच्च प्रजानन्दविवर्धनम् ॥१४०॥ ॥ 140 ॥

एवं वने वनान्ते वा गिरिसानुतटेऽथवा । महावनं स्थापयेच्च नानावृक्षसमुज्ज्वलम् ॥१४१॥

नानावृक्षावलीबीजरक्षणं तत्र निर्दिशेत् । फलैः पुष्पैश्च फलकादारुखण्डादिभिर्नृपः ॥१४२॥

प्रजानां ग्रहनिर्माणसाहयं तेन विनिश्चितम् । तस्मात् सर्वत्र देशेषु भूमिरक्षाधुरंधरः ॥१४३॥ 5

विशालभूमीभागेषु सीमाभित्तियुतेषु वा । करञ्जकान् नक्तमालानेरण्डान् भूर्जकानपि ॥१४४॥ 6

अर्जुनान् सर्जकान् नीपान् कदम्बानपि भूरुहान् । शिग्रून् शमान् मरुवकान् देवदारुद्रमानपि ॥१४५॥ 7

श्रीपर्णकान् तिन्दुकांश्च वटान् प्लक्षान् तथा क्वचित् । मद्दारूनपि तथा प्रियङ्गूंश्च क्वचित् स्थले ॥१४६॥

[ 1 धीमान् (Suggested in the text)] 2 गृ 3 त् (?) 4 च यथा..(?) 5 गृ 6 मि 7 द्रु

विभीतकानामलकीस्तथा हैमवतीरपि। कर्णिकारांश्च लिकुचान् निम्बवृक्षानपि क्वचित् ॥१४७॥
अशोकांश्च शिरीषांश्च दाडिमानपि भूमिपः। जम्बूवृक्षान् कपित्थांश्च सर्वतो भद्रकानपि ॥१४८॥
चाम्पेयकान् कुरबकान् वर्णजानपि कर्णिकान्। तापिच्छांश्च तमालांश्च सिन्दुवारद्रुमानपि ॥१४९॥ a
तिंत्रिण्याख्यान् महावृक्षान् तथा वंशानपि क्वचित्। चूतान् रसालानाम्रांश्च बदरीन् वा विशेषतः ॥१५०॥
॥150॥
रण्यद्रुमान् मधूकांश्च पीलुवृक्षान् तथैव च। पुनागान् पारिभद्रांश्च कोविदारद्रुमानपि ॥१५१॥ b 1
एवं नानाजातिरूपान् वृक्षान् सारान् यथाक्रमम्। स्थापयेत् पृथिवीपालः रक्षयेत् जलसेचनैः ॥१५२॥ 2
दवाग्निबीजनात् दुष्टसत्वाच्चोरात् यथाक्रमम्। एवं महावनं रक्ष्यं नदीतीरेषु वा क्वचित् ॥१५३॥
गान्धारकुन्तिपाञ्चालकाश्मीरावन्तिभूमिषु। सिन्धुनेपालनिषधकोसलाङ्गादिभूमिषु ॥१५४॥
धूर्जरावन्तिसौराष्ट्रप्रमुखादिस्थलेषु च। देशेषु विविधेष्वेवं सारभूमिस्थले नृपः ॥१५५॥ 3
महावनं सर्ववृक्षषण्डोज्ज्वलितदिङ्मुखम्। तटाककुल्यावाप्यादिसंयुतं च समन्ततः ॥१५६॥
कृषीवलैः स्वप्रजाभिः स्थापयित्वा यथाक्रमम्। वीरैर्भटैर्योधवर्गैः रक्षयेत् सुखसिद्दये ॥१५७॥
पर्वतस्यान्तिकस्थाने वनमध्येऽथवा क्वचित्। खनिं च नानालोहानां जनयित्रीं महीपतिः ॥१५८॥
परीक्ष्य भूगर्भनाडी रक्षयेतत्र तत्र हि। अयः खण्डं पित्तलांश्च सुवर्णं रजतं तथा ॥१५९॥ 4
गैरिकानपि यत्नेन संपाद्य क्षेमसिद्दये। लोहकार्यप्रवीणैश्च लोहकारैश्च तक्षकैः ॥१६०॥ ॥160॥
सुवर्णकारैरपि च ग्रामेषु नगरेष्वपि। नानायुधानां जालनि कल्पयित्वा विशेषतः ॥१६१॥ 5

1 न्ना 2 रू 3 गु (?) 4 त्त 5 ला a न्धु b थ

कृषियोग्यान्यायुधानि दत्वा ग्राम्यजनाय च। पुर प्रासाददुर्गादिरक्षार्थं च महीपतिः ॥१६२॥
नानाविधप्रहरणजालं योधेष्वपि क्वचित्।सेनास्थानेषु च तथा स्थापयेत् पालयेदपि॥१६३॥
जाम्बूनदैश्च रजतैः खनिजैः भूपतिः क्रमात्।समुद्रवीचीजनितप्रवालैश्चापि मौक्तिकैः॥१६४॥
नानाभरणजालानि कल्पयित्वा विशेषतः।देवेभ्यः प्रथमं दत्वा ब्राम्हणेभ्यस्ततः क्रमात॥१६५॥
स्वयं धृत्वा च महिषीं प्रासादप्रमदा अपि। तैस्तैराभरणैः काममलंकृत्य यथाक्रमम्॥१६६॥
परमानन्दसंपन्नो रक्षयेच्च महीमिमाम्। एवं भूपस्तत्र तत्र देशे सर्वसुखावहम्॥१६७॥
संपादयेत्तु विविधद्रव्यजालं तु सर्वतः।कल्पभेदेन वा कालक्रमेण च महीपतिः॥१६८॥
कृषिकर्मविकल्पं च बीजावापविकल्पकम्।शीतोष्णस्थानभेदेन विभक्तां च कृषिक्रियाम्॥१६९॥
गोप्रचारवशाद्वापि वृष्टिपातक्रमादपि। जलाधारवशाच्चैवं ज्ञात्वा बहुविधोदयम्॥१७०॥ ॥170॥
कृषिकर्म प्रयुञ्जीत सारक्षेत्रानुसारतः। महीपाले प्रसन्ने[1] तु सर्वं सिध्यति भूतले॥१७१॥
महीपालेऽप्रसन्ने तु सर्वं नश्यति निश्चितम्।तस्मात् राष्ट्रसुभिक्षार्थी प्रसन्नः पृथिवीपतिः॥१७२॥
कृषीवलात् करद्रव्यं पणं वा धान्यमेव वा।यथाक्रमं च स्वीकृत्य भूतलं सचराचरम्॥१७३॥
स्वकुटुम्बसमं न्याय्यमार्गेण परिरक्षयेत्।ब्राम्हणाः क्षत्रिया वैश्याः शूद्राश्चान्येऽपि मानवाः।
कृषिक्रियासाह्यमारात् नृपात्स्वीकृत्य भक्तितः॥१७४॥
यथाकालं यथाचारं संपाद्य च कृषिं भुवि।करद्रव्यं च दत्वा ते राष्ट्रक्षेमाभिवृद्धये॥१७५॥

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देवानागन्तुकान स्वीयकुटुम्बं च यथाक्रमम् । पोषयित्वा विशेषेण धर्मो मार्गो यथोदिन: ।।१७६।। 1
तथा शक्त्या रक्षयेयु: यशोमण्डितदिङ्मुखा: । एवं ग्रामे जनपदे नगरे वा विशेषत: ।।१७८।।
परस्परस्नेहभाज: प्राप्तभूपालसाह्यका: । वर्णाश्रमक्रियाशक्ता: लसन्तु क्ष्मातले भृशाम् ।।१७९।।

इति काश्यपीयकृषिसुक्तौ शाकादिकृषिक्रमकथनं नाम द्वितीयो भाग: ।। 2

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अथ भोज्याभोज्यक्रमकथनं नाम तृतीयो भाग: ।।

काश्यप उपदिशति -

नृपाज्ञया चोदितास्तु ब्राम्हणा: क्षत्रिया विश: । अन्ये चापि यथाकालं खारक्षेत्रे विशेषत: ।।१।।
कृत्वा कृषिं बहुविधामेवं निर्दिष्टरीतित: । धान्यानां विविधानां च राशिमाढकराशिकम् ।।२।।
मरीचीसर्षपादीनां राशिं स्वग्रहमानयेत् । आतपे शोषयित्वा तान् यथाकालं यथाक्रमम् ।।३।। 3
सज्जीकुर्युस्तु पाकाय प्रत्यहं देवतुष्टये । साध्वीभि: पाककार्यं तु कर्तव्यं देवशासनात् ।।४।।
देवानामतिथीनां च सत्कार: सफलो भवेत् । तत: प्रजारक्षणं च निश्चितं तु मुनीश्वरै: ।।५।।

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धर्मविद्ब्राम्हणस्तस्मात् द्रव्याणां बहुरूपिणाम्। भोज्याभोज्यक्रमं ज्ञात्वा पाके साध्वीं नियोजयेत॥६॥ 1

पील्वन्नं कोद्रवान्नं च न देवब्राम्हणार्हकम्।शुभ्रं च श्वेतवार्ताकं लशुनं ग्रन्जनं तथा॥७॥ 2

पलाण्डुं कवकं चैव निर्यासं च तथा क्रमम्। अभक्ष्यं च ब्राम्हणानां कुस्थलप्रभवानि च ॥८॥

बृहत्कूश्माण्डकं वापि पन्नां शिग्रुं च पीलुकम्।वर्जयेत् ब्राम्हणस्तत्र चास्थलप्रभवं तथा॥९॥

पिपीलिकामक्षिकाद्यैः कृमिभिश्चापि यत् ग्रहेदूषितं तच्चान्नमुख्यं वर्जयेत् यत्नतो द्विजः॥१०॥ ॥10॥ 3

सारमेयैः कुक्कुटाद्यैः दुष्टमन्नं तथैवच। विश्वासहीनं दत्तं च दूषितं तु नखादिभिः ॥११॥

तुषतन्त्वादिदुष्टं च द्विजोऽन्नं परिवर्जयेत्। मार्जारैर्दूषितं यच्च यदाघ्रातं च वेश्मनि ॥१२॥

चुचुंदरीमूषकाद्यैः यच्चान्नाद्यं हि दूषितम्। तत्सर्वं वर्जयेद्यत्नात् ब्राम्हणस्तु विशेषतः॥१३॥

अन्नाद्यं नीचदुष्टं तु तथा घ्रातं तु वा क्वचित्। स्पृष्टं वा न तु भुञ्जीत श्रेयोऽर्थी सर्वतः क्षितौ ॥१४॥

अशुध्दस्थलदत्तां च सर्वं तच्च विवर्जयेत्। कवलादवशिष्टं च यास्यात् पतितमेव च॥१५॥ 4

अभक्ष्यमाहुर्मुनयः यशसे क्षेमसिद्धये।अदत्तमतिथिभ्यश्च देवताभ्यो विशेषतः॥१६॥

अकालदत्तं च तथा यदन्नाद्यं ग्रहादिषु।अस्थले च तथा पक्वं जलेनाक्षालितं तथा॥१७॥ 5

अन्नं वा शाकराशिं वा भक्ष्यं वा खाद्यमेव च।अभक्ष्यमेव निर्दिष्ट ब्राम्हणानां विशेषतः ॥१८॥

अकुलीनेन पक्वं च मलमूत्रादिदूषितम्।रोमादिदूषितं यच्च स्वेनादौ भक्षितं तथा ॥१९॥

अस्नातपक्वं च तथा वर्जयेत् भोजनादिकम्।हस्तदत्तं चापसव्यकरदत्तं च यत्तथा॥२०॥ ॥20॥

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अयः खण्डेन दत्तं वा दारुखण्डकरण्डकैः । तथा पर्युषितं चान्नं वर्जयेत् द्विजसत्तमः ॥२१॥
ग्रृहान्तरे तु यत् पक्कमानीतं स्वगृहं ततः । तच्चाभोज्यमिहादिष्टं मुनिभिः शास्त्रपारगैः ॥२२॥ 1
दध्यन्नं च तिलान्नं च रात्रौ भुञ्जीत नो द्विजः । चन्द्रिकाभोजनं चैव प्रदीपेन विवर्जिते ॥२३॥
स्थले च भोजनं तद्वत् भोजनं तमसि क्रमात् । निन्द्यमेतच्च निर्दिष्टं मुनीन्द्रैश्च सुरैरपि ॥२४॥
सफेनं च जलं तद्वत नद्यादेः प्रथमोदकम् । आकाशात् पतितं तोयं धारासलिलमेव च ॥२५॥
अस्पृश्यैः स्पृष्टतोयं च यत्नतो वर्जयेत् बुधः । उष्ट्रक्षीरं चैकशफक्षीरं द्विखुरजं तथा ॥२६॥
क्षीरं सलवणं तद्वत युवतिक्षीरमेव च । वत्सप्रहीनगोक्षीरं वत्सान्तरविनिस्त्रुतम् ॥(स्त्रु)॥ २७॥
गोक्षीरं च तथा लोके हयजाक्षीरं च दूषितम् । दुग्धं च ताम्रविन्यस्तं वर्ज्यं निन्द्यं च तद्विदुः ॥२८॥
अतस्तु श्रोत्रियो विप्रः धर्मवित् ब्राम्हसिद्धये । भोज्याभोज्यक्रमं ज्ञात्वा पाकं कुर्याद्यथाविधिः ॥२९॥ 2
क्षत्रियाणां च वैश्यानां शुद्राणामपि भूतले । नोक्तः स एष नियमो मुनिभिस्तत्त्वदर्शिभिः ॥३०॥ ॥३१॥ 3
मांसभोजनमप्येषां न दोषायेति निश्चितम् । ब्राम्हणाः क्षत्रियावैश्याः शूद्राश्चान्येऽपि भूतले ॥३१॥
भोज्याभोज्यक्रमं ज्ञात्वा देशाचारप्रमाणतः देवतायार्पितं पूर्वं भुञ्जन्तस्तदनन्तरम् ॥३२॥
धूतपापाश्च काशान्ते श्रद्धाभक्तिगुणोज्ज्वलाः । तस्मात्सर्वत्र देशेषु ब्राम्हणाः क्षत्रियास्तथा ॥३३॥
वैश्याश्च शुद्धद्रव्याणि तण्डुलादीनि नित्यशः । शाकद्रव्याण्यपि तथा पावनानि नवानि च ॥३४॥
जलं दुग्धं दधि घृतं नवनीतमथापि वा । तैलं च पत्रवर्गं च पात्राणि च यथाक्रमम् ॥३५॥

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स्वयं वा स्वीयपत्नीभिः साध्वीभिः स्वस्ववेश्मनि। गोमयालिप्तभूभागे शुद्धां शुक्लीं च सेन्धनाम् ॥३६॥

पूजयित्वा विशेषेण भूमिं वासवमेव च। यमं चाग्निं च वरुणं ब्रम्हाणं च विशेषतः॥३७॥

पाकं कृत्वा यथाकालं भाण्डैश्चापि घटादिकैः। ततः शुद्धस्थले स्थाप्यं षड्रसादिसमुज्ज्वलम् ॥३८॥

भक्ष्यं भोज्यं च विविधं वटकादिकमेव च। पाकशास्त्रोक्तमार्गेण पक्वं तैलघृतादिभिः॥३९॥

शर्कराद्यैर्गुर्नानाव्यञ्जनादिभिरन्वितम्। तेमनाश्चैश्च विविधैः सोपस्कारैर्विशेषतः॥४०॥ ॥40॥ 1

पक्वं श्रद्धाप्रीतिपूर्वं यथाकालं यथाक्रम्। स्थापयेयुर्देवतार्चास्थले वेश्मनि वा पुनः ॥४१॥

पिटकादिषु भाण्डेषु पूरयेयुर्यथोचितम्। निवेदनाय देवानां तदेतच्छास्त्रचोदितम् ॥४२॥

इति काश्यपीयकृषिसूक्तौ भोज्याभोज्य क्रमकथनं नाम तृतीयो भागः ॥

1 द्यैर्गुडैर्ना

## अथ विविधहव्यनिवेदनक्रमकथनं नाम
## चतुर्थो भागः ॥

काश्यप उपदिशति -

पाकक्रिया तु द्विविधा नित्यनैमित्तिकक्रमात् । नित्यं तु नित्यं देवेशदृष्टिपातादि योग्यकम् ॥१॥

नैमित्तिकं च तद्वत्स्यात् पात्रभेदस्तु तत्र हि । देवार्हं भोज्यजालं तु हव्यमित्यभिधीयते ॥२॥

इदमेवातिथीनां च प्रजानां शास्त्रचोदितम् । भोज्यमित्येवमादिष्टं कव्यं पितृनिवेदितम् ॥३॥

तत्तु स्वबन्धुभिर्भोज्यं शास्त्रज्ञैः समुदीरितम् । देवेशरूपं विविधमादिष्टं पूजनार्हकम् ॥४॥ 1

शिवलिङ्गस्वरूपं च सालग्रामशिलात्मकम् । धातुर्विष्णोश्चावतारभेदं ज्ञात्वा द्विजोत्तमः ॥५॥ 2

क्षत्रियो वा वैश्यकश्च यथाशक्ति विधानतः । सान्ध्यं कर्म तु निर्वर्त्ये देवपूजां प्रकल्पयेत् ॥६॥ 3

राजोपचारवत्तत्तु सकलं शास्त्रचोदितम् । गण्डूषाचमनाद्यं तत् स्नानवस्त्रादिधारणम् ॥७॥

भोज्यासनं प्रकल्प्याथ श्रद्धाभक्तिसमन्वितः । साध्वीभिः पक्वमन्नादिविविधं भोज्यमुत्तमम् ॥८॥

समर्पयेत् देवतृप्त्यै नानाव्यञ्जनशोभितम् । गुडान्नं पायसान्नंचतिलान्नं च तथैवच ॥९॥

दध्यन्नमथ मुद्गान्नं अपूपं वटकं तथा । गोधूमवटकं तद्वत् पोलिका माजकामपि ॥१०॥ ॥10॥ 4

मोदकं शर्कराबान्दिद्राक्षैलादिसमन्वितम् । कुंकुमद्रव्यसंयुक्तं घनशर्करकान्वितम् ॥११॥

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पयोगलकबन्दी वा विचित्रान्नमथापि च । युक्त्या पाकक्रमप्राप्तं मधुरं कालयोग्यकम् ॥१२॥
माषतण्डुलसंमिश्रं लवणादिरसोज्ज्वलम् । डलं महाडलमपि पाकप्राप्तं घृतान्वितम् ॥१३॥
तदेव दहयन्वितं वा सघृतं च सशर्करम् । सुधारससमं पक्वं डलं च विविधाकृति ॥१४॥
शार्करं जालेपिकं वा मुद्गगोधूमसंयुतम् । सघृतं माषसंपन्नं अथवा तत्प्रकल्पयेत् ॥१५॥
मधुरं लवणं तद्वत् कटु तिक्तं तथाम्लकम् । क्वचित् तुवरकं वापि षड्रसं द्रव्यमीरितम् ॥१६॥
गोधूममाषमुद्गानां चणकानां च पिष्टकैः । डलादिभक्ष्यं विविधं खाद्यं पेयं तथा क्वचित् ॥१७॥
चर्व्यं च क्रमतः पक्वं रसनारुचिदायकम् । युक्त्या पक्वं यथाकालं तैले वाथ घृतेऽपि वा ॥१८॥
अन्नाद्यं तेमनाद्यं च तथातिरसमुख्यकम् । भक्ष्यं च विविधं पक्वं श्रद्धाभक्तिपुरःसरम् ॥१९॥
शुद्धद्रव्यैश्च संपक्वं नियमेन महानसे । एतत्सर्वं भक्ष्यजालं भोज्यादि च यथाक्रमम् ॥२०॥ ॥२०॥
भोज्यासननिविष्टाय विष्णवेऽमिततेजसे । देवार्चनक्रमाद्भक्त्या चार्पयित्वा द्विजोत्तमः ॥२१॥
वीरवस्यां[1] समाप्याथ पुष्पगन्धानुलेपनैः । चामरव्यजनादीनां वीजनैः स्तुतिभिस्तथा ॥२२॥
राजोपचारवत्सर्वं देवार्चनमुदीरितम् । कल्पयित्वा विशेषेण नित्ये नैमित्तिके तथा ॥२३॥
समये भक्तिवाक्याद्यैः प्रणामादिभिरन्वहम् । तोषयित्वा जगन्नाथं प्रणीताभीष्टदायकम् ॥२४॥
शुद्धद्रव्यैः कृषिप्राप्तैः पक्वं प्रत्यहमादरात् । वासुदेवाय - कृष्णाय विष्णवे परमात्मने
ततस्त्वतिथिवर्गाय स्वकुटुंबाय च क्रमात् ॥२५॥

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भोज्यमन्नं खाद्यवर्गमन्यत्पक्कं महानसे । विविधं षड्रसोपेतमात्मरक्षणहेतवे ॥२६॥
अर्पयेत् भोज्यपात्रेषु कदलीप्रमुखेषु च । भोजयित्वा विशेषेण प्रीतिपूर्वं द्विजोत्तमः ॥२७॥
सचूर्णं ताम्बूलं च दत्वा तेभ्यो यथाक्रमम् । एवं नृपाज्ञयालोके द्विजा धर्मविदां वराः ॥२८॥
देवयज्ञं भूतयज्ञं द्वयमत्र महीतले । धर्म्यं यशस्यमायुष्यं पालयेत् भक्तिपूर्वकम् ॥२९॥
कुटुम्बस्य नृपस्यापि राष्ट्रस्य च विशेषतः । क्षेमसिध्यर्थमेवं हि कर्तव्यमिति शास्त्रतः ॥३०॥ ॥३०॥
सर्वलोकहितार्थाय काश्यपो मुनिरब्रवीत ॥

इति काश्यपमुनिविरचितायां काश्यपीय कृषिसूक्तौ विविधहव्यनिवेदनक्रम - कथनात्मकः चतुर्थो भागः ॥

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समाप्ता चेयं काश्यपीयकृषिसूक्तिः ॥

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गोब्राम्हणेभ्यः शुभमस्तु नित्यं
लोकाः समस्ताः सुखिनो भवन्तु ॥

# Kashyapiyakrishisukti

(Translated by S M Ayachit)

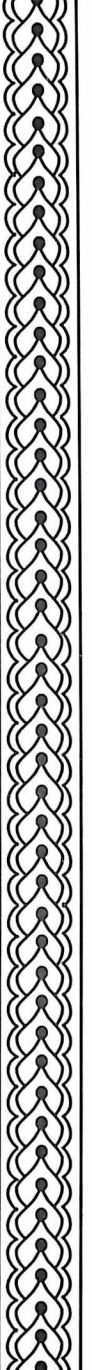
# Table of Contents

# A Treatise on Agriculture by Kashyapa

Adages about agriculture as told by sage Kashyapa.

Classified into four sections:

1. Orderly exposition of grain-agriculture;
2. Orderly exposition of vegetable husbandry;
3. Orderly exposition of edibles and non-edibles; and
4. Orderly exposition of information on multiform (sacrificial) offerings.

(The base text)

## Section I: Orderly exposition of grain-agriculture

### 1. Introduction

Here is the scientific instruction in this [above-stated] order. Kashyapa [thus] instructs:

1–2. A dutiful Kshatriya king, who bears the burden of security of [his] subjects, should punish those who deserve punishment, establish truth and virtue in all possible ways, and nourish the subjects, especially those who are intent on [their respective] class and order [in social life] and also others in due course in a discreet manner, with a view to please the gods.

3–4a. The gods, yakshas, *gandharvas,* manes, sages, and others whoever are prescribed as eligible to [undertake] [religious] functions like sacrificial [rites]/ offerings of oblations—gratification of [all] these through sacrifices is termed as *'devayajna'* by the wise.

4b–5a. [Similarly] gratification of mankind and guests through feeding, etc. and timely gratification of cattle are called *'bhutayajna'*.

5b–6a. *'Rshiyajna'* and other [duties] which are mentioned by the sages in this context, are also to be fulfilled through teaching of Vedic lore, prayers, and receipts.

6b–8. Hence in all sacrifices *'devayajna'* is principal; the *'bhutayajna'* comes next. This is my considered opinion. Therefore, in all countries, the lord of the land, who has taken the responsibility of protection, should particularly perform these two. The wise have declared the *devayajna* [as] successful [if performed] with pure material.

9. The primary article prescribed for it is mentioned as food grains, etc. which are produced by earth.

10. This earth in the ancient time was sustained by [God] Vishnu in [His] boar incarnation, retrieving it from the nether world, desiring prosperity. Goddess Lakshmi implored upon Lord Vishnu, the wielder of *Sharnga* bow, the Supreme Being.

11. He then narrated with pleasure the merits of land [to Her] in the vicinity of [other] gods. Earth is called *Ratnagarbha* (= Container of precious jewels) and *Vasundhara* (= Container of wealth) because it holds jewels and other precious material in her womb (= interior).

12. Earth is also called *Medini* (= fertile) because by producing grains, etc. and medicinal plants, and also by the water springing from its interior it is conducive to the life of [all kinds of] beings.

13–14a. The bipeds, the quadrupeds, the oviparous as well as all other species of various types exist and sustain life on the earth definitely due to the vital power which is the quintessence of the land.

14b–16. Due to the nourishment and the gift of vitality to the reptiles as well as bipeds and quadrupeds, gods are ever pleased, leading to truthful righteous conduct, which fructifies the fourfold aim of life. This way nature is fruitful, and the Architect of this world delights. Therefore, grain is the essence of life of the earth; the function of the earth [in sustaining the beings] is the best.

17. Likewise, gods have described grains as an auspicious thread with black beads. Grains and other vegetation are the living pulse making up the elements of life of the earth.

18. [Production of] grains and other vegetation are the sole purpose for highest fulfillment of the earth. The rich earth full of vegetation is the cause of growth of living beings.

19. It is the giver of all auspicious things, leading to the satisfaction of gods especially with its perpetual power to produce grain and fountains of sweet water.

20. Following the instruction of [Lord] Vishnu, the earth shines forth on all sides and this mother of living generations is protected by Vishnu.

21. The earth, the feeding Mother, giver of nourishment and satisfaction, and above all a storehouse of gems, is a constant source of protection to all.

22. The Mistress of Vishnu (= The Holder of *Sharnga* bow) shines forth with mountains as her high breasts, oceans as her girdle, and her abundant sea-pearls as the rich ornamentation.

23. The Sun, the Moon, and Agni (= Fire) are her lights, gentle breezes her fans, and large forests are the places of excursions of this beloved of Vishnu.

24. The all-tolerant earth positioned by the circle of quarters appears splendid. The king should divide this entire earth with her lovely locations suitable for agriculture in different countries in diverse shapes.

## 2. Division of land

Kashyapa [further] advises as to how to divide land into different areas of mountains, oceans, rivers, forests, and fertile regions and earmark the areas suitable for agriculture.

25. Land is encircled by oceans on all sides [ever] since it was created. [God] Brahma, the Creator, initially fashioned [all] the sights even.

26. Land is diverse, yielding fruits even in different ages; it has been commended by multitudes of gods, semi-divine beings, sages, [and] kings.

27. Land is intended to receive excellence in every age. This land is at times immersed in floods of water from oceans.

28. At [other] times oceans leave behind the [deep] regions of caverns as well; sometimes the stalks of the land are revealed, suited to season and according to the age.

29. Land is endowed with strong and weak streams, is deep [in some places] and high [in others], and is well divided by mountains, and also by rivers here and there.

30. It is divided by oceans, by sappy land, and by large lakes. It is full of gravel at some places and is extremely hot elsewhere.

31. Whereas it is [also] sometimes devoid of water successively, and salty elsewhere, it is also harmful to the seeds at some places.

32–33. Since the earth is of a multifarious character by nature, a king consecrated to the fostering of all beings should initiate scrutiny of fields with marks of prosperity for crop production. The soil should be devoid of pieces of bones, stones, etc.

34. It should consist of pliant clay, [very] unctuous, with reddish and black hue, without chaff [and] glass, full of essence and glossy with water.

35. It should be without holes, should be neither too deep nor too high; it should be even, seasoned with fragrance of *mallika* (Arabian jasmine), *jati, kutaja,* and *suragandha.*

36. Or it should be distinguished with sprouts of *padma* (an orchid), *kharjura* (date palm), and *tinisha,* and should not be saturated with water, but also sometimes saturated in water.

37. Conducive to speedy growth of the seed [and also] easy to furrow, it may be moistened by sprinkling bulls' foam, and inhabited by beneficial living creatures.

38. Devoid of thorns, cow-dung, etc. it should be thickly set and compact. When lifted up it should be very heavy. It should be suitable for promoting growth of medicinal plants.

39. It may possess Brahmanic qualities, qualities of Kshatriyas, as also those of Vaisyas and Sudras. In some regions it may have mixed qualities.

40. The land [should be] divided according to the fivefold qualities [and further classified as] having clear water, internally substantial, having some essence in the upper layer, and conforming to the standard.

41. The land should be pleasing to the eye, devoid of anthills and harmful creatures, and inhabited by other animals and birds.

42. It should not be exposed to gusty winds, whirlwind, or fire. It should not have absorbed water and should be favorable for the growth of gardens and construction of pleasure-groves near the [farm-] houses.

43. Having abundant shady trees and not having many potholes, it should be conducive to prosperity, time and again leading to the growth of a number of varieties of seeds.

44. Extremely soft to touch, liked by cows and other cattle, [also] endowed with distinctive lucky marks, it may have a few defects here and there.

45–46a. With streams of water easily accessible, [and] with water [already] easily adapted, it should be furnished with threshing floors. Endowed mostly with these characteristics the king should search and acquire the best land.

46b. The king should appoint for this purpose those who know the way to scrutinize the [quality of the] land. They should be equipped with the [required] eligibility.

47. They may belong to any class of the [fourfold] hierarchy: Brahmins, Kshatriyas, Vaisyas, or even Sudras. They should be aware of the rules for discovering groundwater, and should be experts of agricultural science.

48. On an auspicious [day] with lucky omen, the expert should bathe, put on clean clothes, and wear a golden ring [on one of his fingers].

49. He should then reach the indicated ground and circumambulate it with a pure body and mind accompanied with a learned Brahmin to chant auspicious mantras related to the undertaking of a new venture and to bless the same.

50. Either in the morning or in the evening, [for the purpose of purifying the atmosphere] the land should then be sprinkled with the fivefold cow-products [milk, curd, ghee (clarified butter), urine, and dung] or may be simply with clean water, by Brahmins proficient in Vedas.

51. Digging at a point with an axe or a hatchet, or even with a balance-rod, the expert should minutely observe [the effects] repeatedly.

52. Having smelled and tasted it [the water] after drinking, he should weigh it on a balance. The expert should then put it in a pot full of water for about a *ghatika* (= nearly half an hour).

53. He should know the characteristics of the soil by its color, the drop of water [turbidity ?], taste, and fluidity and ascertain that the soil is of a uniform shade of the color and is thick-set and sticky (= glistening).

54. Such land has been concluded by scholars as auspicious even for gods [and] kings, conducive to safety and prosperity of Brahmins and the general public.

55. A good quality land yields good results to everyone, confers good health on the entire family, and causes growth of money, cattle, and grain.

56. Hence, only good soil should be indicated, or in some cases that of a mediocre quality [also may be specified], but an expert of soil should by all means avoid a bad quality [land].

57–58. "This soil is fit for agriculture", "This is suitable for gardens", "This one be declared good for [conservation of] forest", [and] "This fourth [type of] land is indicated as naturally fit for reservoirs of water"—thus [the officer] should indicate [allocation of] land by the king's order on an auspicious moment.

59. One who desires the land [for himself] has to effect a division of boundary and the [main] land, in villages and countries, in forts and also in towns.

60. An intelligent and wise [officer], conversant with the nature of many [types of soil] and knowing the quality of water [there], should tactfully indicate land as allocated for agriculture, horticulture, etc. even within the premises of the palace for the sake of happiness of living beings.

### 3. Construction of water reservoirs

Kashyapa [further] instructs how to establish water reservoirs.

61. The king should plan villages, forts, and towns with the help of expert engineers well-versed in science and conversant with the standards.

62–63. In the interiors of forests, on the banks of rivers, or on the tablelands of mountains, in his own countries and states, the king should establish stations for herdsmen and hamlets for cowherds, or cow-pens as shelter for cattle, and [should lay] a network of small villages on auspicious occasions.

64. It [= village] should be equipped as a rule by the king, with wells and reservoirs of water, adorned with gardens, etc. and enclosed by agricultural fields.

65–66a. The fertile land of villages, cities, and also towns has been declared as fit for growing grain; sage Gargya, the best among the informers, has announced that the grain itself is the pulse of our breath.

66b–67. The best sages have expressed that the construction of villages, etc. will have the everlasting desired results only due to the proximity of fields fit for agriculture. Protection of living beings, as also the success of the four aims of human life can thereby be ensured.

68–69a. Satisfaction of gods through the products of sacrifices is also achieved. In short such fertile soil has been indicated as the savior of life in a high degree for the living world [and thus] the excellent reward for living beings.

69b–70a. Therefore, the king should specify everywhere, land invested with good marks and divested of defects or at least having negligible defects—the land, stated to be yielding maximum rewards to the living beings.

70b–71a. The king should demarcate the best land of his country by village-roads, city-roads, and highways.

71b–72. To the west, north, east, or south of the villages

and cities at the most convenient places, he should prepare reservoirs of water according to the condition of the land.

73. The reservoir of water to be founded should be deep, equipped with barriers, splendid in the shape of a bow, long in some cases, round in others but essentially unfathomable.

74. These should be taken care of by causeways with firm ridges, and should be equipped with high walls.

75–76a. They should also be equipped with inlets for water. Hence they should be founded near some hill or on a high-level ground joined with a big lake.

76b. A reservoir of water to be constructed on the level ground should be capable of holding abundant water.

77. It may be constructed on firm ground devoid of stones, sand, etc. and may be decked with natural springs.

78. An expert should in this way build a deep reservoir of water equipped with a latch to ward off floods when it is inundated.

79. Thereby [even when the reservoir is full of water] there will not be any obstruction to the villages and cities, ramparts, gardens, forts, or threshing fields.

80. The king should plan its construction at such places as not to cause fear of danger from flooding. Such reservoirs should be regularly examined.

81. Examinations must be ordered frequently either on monthly or yearly basis. The king should also appoint officers in charge of guarding the banks.

82. Especially in the rainy season, keeping a vigil on hundreds of canals [or trenches], wells, and lakes will be beneficial.

83. Beds of water being full and regularly protected, growth of grain, etc. would be assured and happiness too through it.

84. Prevention of diseases and alleviation of danger from fire guarantees best welfare, all-round nourishment, and protection for both the bipeds and the quadrupeds.

85. Also, for birds and reptiles, happiness of the highest degree is guaranteed. Certainly there will be no ailment of any kind for them too.

86–88. While creating the creatures, Brahma directed only one object for drinking, viz., water, for bipeds and quadrupeds, as well as for birds and reptiles. The reservoir of water is therefore pronounced to be the main source of water.

[Verse 87 is a repetition of verse 85b and verse 86a.]

89. Therefore, [the king] bearing the responsibility of protecting the subjects should establish a reservoir of water as described above [and] arrange for its protection in due course.

90. The king should establish two reservoirs of water or at least one, depending on the nature and area of the agricultural land attached to the village.

91. The king should connect the same to a mountain spring or to a deep lake, to a forest river or rarely to a big river also.

92. In various [parts of] the country and especially in the villages and cities, the king should properly design places for using water suited to villages and towns.

93. The king should arrange to grow trees such as *veta* (cane), *vata* (banyan), and sometimes bulbous roots on the banks of the water reservoirs.

94. *Plaksha, asvattha* (pipal), *khadira* (catechu), *tinduka, tintrini* (tamarind), *bhurjara,* and *venu* (reed) too can be planted.

95–96a. *Nimba* (neem), *kadamba* (kadam), and others which are considered important should also be fetched from other places by the king with efforts in due course and the king should arrange to plant them skillfully on the banks of the reservoirs for general welfare.

96b–97. This planting should be done at various places—on low ground of the banks, at the exits of the canals, and at the landing places for drinking water in some cases, so as not to disturb bathing places.

98. [He should plant] trees like *vata* (banyan), etc. which are a source of pleasure, on threshing grounds, banks of lakes, oblong wells, and pools.

99. The king should steadily grow trees providing shade on playgrounds, gardens, and resting places.

100. Trees should also be grown alongside highways and near various reservoirs of water, as they give rise to [air-movement] and remove fatigue of living beings.

101. Trees should be grown at different places like picnic spots, temple gardens, and royal gardens.

102. Trees should be planted especially in residences of sages, cottages, military camps, and royal guest-houses—

103. —in places of sacrifices, and also in places fit for religious offerings the king should arrange to grow trees offering shade, in due course.

104. Trees to be planted should be pleasing to the birds, should yield fruits, flowers, etc., should be cool and delicate, and also should allay diseases.

105–106. *Panasa* (jackfruit) trees which do not have thorns, as also trees of sweet and juicy *amra* (mango) fruits, and those which give flowers like *punnaga, malati, kunda,* and *champaka* (champac) should be planted in rows at various places within enclosures and nurtured in due course by sprinkling water from the reservoirs.

107. Without a reservoir there would be neither facility of water source nor the evening prayers, neither bath nor the growth of trees.

108–109. Thus the thinkers have decided that there would be no happiness without the water reservoirs. Therefore, a king taking up the vow of protection should by all means vigilantly prepare deep reservoirs in villages, in countryside, and also in woodlands.

110. Very strong canals, which would always be full of easily available water-flows, connected with many branches and also with big dams with plenty of water, should also be constructed.

## 4. Construction of canals, wells, etc.

Kashyapa further instructs on canals, wells, etc.

111–112. Where a canal or a lake or a pond incessantly filled with water in the agricultural field has not been designed or cannot be built, there it has been decided by the experts that canals originating from rivers should be constructed. They are stated to be fourfold according to the experts on agricultural science.

113. The canal is either watered by a river, or depends on a deep pool or a large lake, or along the side on a tableland of a mountain.

114–115a. Canals should be constructed out of any of the four types in accordance with the magnitude of the country. Where river, etc. is seen on the upper side as per the inclination of the land, there the mouth [opening] of the river should be made for an excellent automatic flow.

115b–116. Where spots are fit for agriculture in the land of the country, there experts in agricultural enterprises should build a reservoir of water, generally on its upper side may be at a distance or nearby.

117. In some places the beginning of the canal should be on the river flowing eastward; or the canal should be designed on the westward river.

118–119a. Or it should be devised on a river running in various quarters, or in rare cases on a river entering different corners. But in all cases, the course of the river flowing on a highly situated land is specified.

119b–120. Having laid the bed of the canal starting from a river and proceeding downward and after making it pass through various territories successively, covering diverse types of land, village after village, and forest after forest—

121–122a. —it should ultimately be led to one's own field to achieve natural prosperity. The breadth of the canal is stated to be four, five, six, seven, or ten cubits.

122b–123. In rare cases, [the second type of] canal is filled with water when fed by a big pond or watered by a river with a large stock of water. The best is that water in a canal that extends up to the portion of one's own field.

124. Accordingly its height should be designed and the depth should be planned everywhere depending upon the water-flow.

125. The king should get [the third type of] canal constructed through a big lake or on level ground, midway, [which would be] beneficial to all beings.

126. A canal [of the fourth type] can also be prepared on level ground depending on mountain cascades leading to one's own field for the increase of agricultural wealth.

127. One canal full of water, or in some cases two or three are prescribed for good [results] of the fields.

128. Agricultural experts have resolved that where there is no river in the country, even a canal provided in a sandy place would be conducive to happiness.

129. A natural spot of firm field, endowed with constant flow [of water] and devoid of stones, with agreeable qualities, tends to accomplish the prosperity of fields.

130. Or the chief should propel a canal starting from a pond for the welfare of his village. It may be used for gardens or pleasure-groves in the countryside.

131–132a. The experts conversant with the past history have determined that skillful construction of a canal to create artesian wells for bathing, drinking, and for agricultural operations on the ground is a [source of] protection for the living beings.

132b–133. In some [parts of the] country, the surface ground itself is likely to damage [or destroy] the canal water or just dry it out by inherent defects and other factors. Hence expert engineers of canals should avoid such ground.

134. At times salty ground appears on all sides in the country; such ground as also the ground with some noxious quality of soil should be avoided for canals.

135. Therefore, a king should finalize design(s) of canal [projects] in the country [only] after [duly] considering the ground to be endowed with good qualities to enable the growth of grain.

136. As per necessity two or three canals should form the project; however, such decisions are said to be [taken] in all cases depending on the location.

137. Those who are excellent thinkers and who know the science have declared gradual entrance of all canals into water storage places.

138. In places devoid of lakes and in [similar] villages, towns, forests, and thickets, the wise man should arrange the canal so as to reach the field.

139. There on the surface a small canal is recommended by the wise as yielding success especially in reaping better crops.

140–141. Water is deemed life [itself] of living beings and the crops. Therefore, the king should effect in all quarters canals, depending on rivers, or built on different sites, and should see that they are filled with water. He should get [them] dug up and protect them to ensure welfare.

142. [A canal] unprotected and destitute of water is defective yielding nothing. Hence all kings should take care of canals in their best possible manner.

143. "Even more than the ponds, lakes, wells, etc. protection of canals should be treated by them as their dharma" said the sages who know the truth.

144a. Increase of water [supply] on the earth has been enjoined for the upkeep of agriculture.

144b–145. In some [parts of the] ground the presence

of water is in the upper portion, [whereas] elsewhere [it is found] down below. In some cases, it vanishes for the most part in stones [= mountains].

146–147a. In other places the stream itself disappears due to blemishes of soil. Therefore, those who are aware of the principles of agricultural science have laid down that ground which is full of water and abounds in gravel is fit for ponds and wells [and not for canals].

147b–148. In a country where canal water is not adequate in summer for grain fields or for garden, the king should order construction of wells everywhere.

149–150a. He should order to build, dig up, and duly protect wells, small and big, and ponds [or lakes], quadrangular, round, or oblong.

150b–151. Generally in all countries water is seen in the lower level [of ground] and sometimes at the base of rivers in the months of the Sun's northward movement. Therefore, digging up of wells, etc. should be undertaken in these months.

152–153. It would be fruitful for getting full [supply of] water lasting for a long time. The wise lord of earth should first determine the position of water currents through a scrutiny of the ground situation from [a look at] trees, etc. with the help of persons knowing the procedure of [using] sticks [to find out] groundwater.

154. Then after examining [the condition of] soil, [he should] finalize the digging [operation] for wells and lakes, etc. [to be undertaken] on an auspicious time. Usually digging [work] at daybreak [or morning] is said to be leading to good results.

155–156a. The king, after having worshiped Varuna, the presiding deity of water, the goddess Earth, and the sylvan deity, and having given an offering should fix the lake, well, and oblong reservoir in due course.

156b–158a. Having first dug up a big pit, oblong, quadrangular, or round in shape, and placing the dug-up matter at a distance, soil should be taken out gradually till water appears. Only the gallant soldiers and peasants should be entrusted with this task.

158b–159a. If the water is found mixed with sand in these wells and other reservoirs, procedure for deeper foundation is laid down for strength.

159b–160a. The establishment of the foundation in a graveled place should be with a structure of well-baked bricks.

160b–161. In a few cases of building oblong wells on a hard surface of land, the foundation should be worked out at a lower level with pieces of stone. Similarly, foundation at the bottom of the well should be properly laid.

162. Having gradually strengthened the foundation in this way on the lower layer of the well through the operation of taking out the [lumps of] loam mixed with sand and water, [and] having ascertained a constant and abundant source of water—

163. —the king should plan construction on the foundation in the well, etc. in due order and time, with pieces of bricks.

164. Wise men knowing the truth of the matter have announced construction of wells with bricks, etc. well mixed with mortar as ensuring hold for a long time.

165. Hence it has been decided in the science that construction of wells and reservoirs, etc. should be effected with brick and mortar, etc. in all places.

166. Day-to-day planning should be effected with bricks, etc. from the foundation up to the surface of the ground, planning a staircase wherever possible.

167. An opening gate on the ground with slabs should [also] be designed in due course accompanying it for which the east or west of the site is said to be suitable by the wise.

168–169a. The *ghatiyantra* (= contrivance) should be provided for raising water on the bank with stones. Then a small channel on the banks from ground should be provided suitable to the place for [smooth] flow of water.

169b–170. The water-raising contrivance is manifold; the best is that plied by bullocks; the middle [type] would be worked by elephants with their trunks, etc. with the help of strong chains, and [lastly] the meanest [type] is that operated by human beings.

171–172a. By the force of this contrivance, water on the lower ground steadily reaches the bank of the well or reservoir, etc. [as] seen everywhere all around. This water from the channel is recommended for grain fields.

172b–173. Therefore, intelligent persons on this earth engaged in agricultural operations from any stratum of society—Brahmins, Kshatriyas, Vaisyas, or Sudras—should skillfully take water from the well or reservoir, etc. by using this contrivance.

174. Similarly they should also use water from a lake or river stream or a [deep] pool, [which is] pure [i.e., unmixed] and devoid of any fault.

175. Water may be led to grain fields, vegetation basins, or even to arbors of creepers like *champaka* (champac), etc.

176. Thus they achieve the purpose of cultivation as prescribed. Hence, peasants should first accomplish the reservoir site.

177. It may be a canal, a well, a pool, or a lake; but find they must and acquire a guaranteed source of water.

178. By the will of God or by the divine power of the great sages rain during the time of movement of clouds is assured in all places.

179. The king should arrange to fill up the reservoirs with cloud water in due time for ensuring [overall] well-being.

180–181. That water [therefore] should be preserved by all [sorts of] efforts, as agriculture is said to depend

on water. Hence, kings and [other] eminent persons should obtain water by exerting everywhere in the seasons and conserve it—thus spoke the great sage Kashyapa.

## 5. Characteristics of good farmers and village officers

Kashyapa [further advises]:

182. Those of the villagers who are engaged in agricultural pursuits should be free from hypocrisy, jealousy, etc. seeking mutual interests.

183. They are devotees of cow, earth, and gods; they are absolutely truthful in speech, intent on being agreeable to others, and always contented in mind.

184. Without any foes in the world, their aim is [carrying out] plans of others; beaming with tender love of all the animal class, they are experts in 'just' thinking.

185. They are efficient in calculations, clean, given to purity, devoted in accomplishing essential/obligatory duties in time, and always hospitable to guests.

186. They are without [any vices like] drowsiness, idleness, etc., devoid of [excessive] desire, anger, etc., mutually friendly, and are always ready to help.

187. Such persons are said to be excellent, of holy appearance, and are real protectors of water reservoirs, canals, etc.

188. They are intent on protection of cows, enjoy king's trust, are happy with children, grandchildren, etc. and are amicably disposed to father-in-law, brethren, etc.

189. The Brahmins, Kshatriyas, Vaisyas, and Sudras, others of mixed origin, hunters, and all the rest who live on agriculture—

190. —those who like hunting, those who are cowherds and goat-keepers and all others who subsist upon agriculture—

191. —all these people on this earth, in all countries and of all sorts, have love for each other and are devoted to the welfare of people.

192. They are initiated in the welfare of the world, by the king's order, by the foremost of villagers and by the caste-chieftains.

193. They are consecrated for a sacrifice for protecting each other's lives and for the welfare of all living beings. They are the pure souls.

194. Of these, those Brahmins, who are pure [in heart], devoted to the principles of truth, compassionate, conversant with ethics, adorned by the qualities like repentance—

195. —deservedly inflicting punishment, vowed to the effecting of all-round protection, eagerly [prepared] to obey the king's orders, adorned with many [other] good qualities—

196. —[such Brahmins] should be employed by a king as chiefs of one or more villages, for the sake of prosperity.

197. They decide between just and unjust, establish security and righteousness. These are indeed, the benefactors of agriculture.

198. In fact, kings, Kshatriyas, wealthy people, Vaisyas, and the Sudras should all assist them in their agricultural ventures for the benefit of the people.

199–200. Help to agriculture has been said to be religious as well as conducive to success and health. Therefore, kings, warrior class, Brahmins, Vaisyas, and Sudras should [render] help to agriculture in the measure of their capacity, which would be yielding great fruit. This can be done through donations of different types of seeds and cattle.

201. Great sages have said that abundant merit is acquired through donation of land, digging of wells, protection of agricultural fields—

202. —construction of water reservoirs and especially of wells, and establishment of charitable institutions for food. Great merit accrues by assisting agriculture.

203. Protection of cows and Brahmins, in fact, helping in agriculture according to one's capacity is stated to yield great rewards.

204. Therefore, careful persons should appoint everywhere in the country employees for the protection of villages and ramparts.

205. These employees should, wherever necessary, drive away thieves and punish those who deserve punishment as is warranted.

206. They should thus maintain law and order which leads to the highest kind of happiness by providing security for life. For this service they are praised even by gods.

207–208. "Persons in whom reside all the qualities like truthfulness, charity, forgiveness, good moral character, tenderness of heart, penance, [and] compassion, should be employed by the king—

208–209a. —in due course as village-chieftains, and as officers in the court. Agriculture, in the hands of such people would [prove] beneficial"—so say the great sages.

209b–210. If a Brahmin is not available, a warrior or a trader should be appointed there for the safety of the subjects. By any means, the authority of the sages is [supreme] for safety and success [of the measures].

211. In this world, however, agricultural expediencies are seen sometimes among the Sudras also. Such a Sudra should be rich in good qualities, and devoted to Brahmins.

212. He should be a believer in the science, respectful, servile towards the saintly, intelligent, knowing the measures of [appropriate] time, beneficent and a lover of beneficence.

213. He should be disciplined; his devices should be praiseworthy. Generally in villages everywhere the servant class is said to be the Sudra class.

214. Those people only should be employed in agricultural operations, not any other castes. Vaisyas

and Kshatriyas, who are rich in qualities, who possess keen intellect—

215. —should be appointed by kings in calculation and other business, and on duties of protection, etc. [Similarly] Brahmins should be appointed in policy [matters].

216. In the arrangements of cattle-protection, in devices of the protection of the subjects, in decisions of punishments of thieves, etc. in the safeguarding of water reservoirs, etc.—

217–218. —in guarding temples, etc. and especially in agricultural enterprises, as also in other matters of the village and royal ventures, any one of the Brahmins, Kshatriyas, Vaisyas, and the Sudras, who are firm in judgment, should be employed in any of the positions, which then conduces to safety.

219. In that case, good results for the village and especially the nation are accrued very easily, through consensus.

220. The sage Bhargava has advised, "Look at the birds! They are always of one voice and one opinion."

221. Therefore in a village, country, town, or establishment of a fort, all the people should reside together without jealousy and such other vices.

222. All the people should be together in vigilantly guarding bridges, roads, farms, towns, villages, playgrounds, and gardens.

223. People and cattle of the town should be similarly protected by everyone. Religion and judicial procedures should also be respected by everyone.

224–225a. In all the other matters requiring protection, residents of the village should be personally involved. Such is the teaching of the *Shastras.*

225b–227. Where in a village or country, a royal residency is not built, especially in that country, the minister or a royal family member or a deserving representative should reside for the protection of subjects attending to their financial needs and providing army when there is any disaster.

228–229. He should arrange for their safety by a variety of ways. Brahmins, Kshatriyas, Vaisyas, and Sudras as also those of mixed castes, and also those residents of villages and other places, who are devoted to their own duties, should all enjoy happiness and success.

230. They should gain highest joy with family members and cattle/quadrupeds, and shine forth in those countries especially in their own places.

231. They should follow the orders of the king, respect the Shrutis and the Smritis, always be helpful to others and live fearlessly.

232. Devoid of mental and physical ailments, engaged in doing good work, attending on good people, [they] shine forth in those countries especially in their [own] places.

233. They are all agriculturists from very ancient times and have realized that right and just conduct has rendered them an auspicious and praiseworthy prosperity.

234. Brahmins, Kshatriyas, Vaisyas too, though engaged in their own duties, are eligible for agricultural work. In fact this has been said to be praiseworthy.

235. Sages with divine insight eulogize agricultural business as the basis of sacrifice and as life-giver of living beings.

236. Men should exert and devote themselves to farming whether they get farmlands from a king or purchase one for themselves.

237. They are said to please gods and sages. Of all wealth, agriculture is the highest wealth.

238. As it [= this wealth] cannot be taken away by others, it is commended by everyone. Yielding profuse returns, it provides pure grains and other things which please gods.

239. Keeping away dependence on others, always yielding wealth, it provides for the guests, deities, and one's own family.

240. Giving delight in several ways, the profession of farming is indeed praiseworthy. Any other livelihood involves dependence.

241a. Other professions are destructive of [religious] merit, and have been depreciated by those who know the reality.

241b–242. Hence merited [= qualified] persons, through their own efforts, though endowed with Vedic education [Brahmins], motivated by protection [Kshatriya] or trade [Vaisya], and manual work [Sudras and mixed castes]—

243. —being truthful and kindhearted always turn to agriculture, and are lauded by saints and gods profusely.

244. The natural inclination of people towards agriculture pleases gods and must be nurtured with special effort as it sustains life of all beings.

245. Sages are of opinion that farming activity should be planned and undertaken in every community, in every country, in every rural part, and in every tableland.

246. Sages of ancient times have pursued agricultural activities even on open yards of cottages with a view to benefit all beings.

247. The initial agricultural work was carried out throughout the country in all parts by those who had sharp acumen, and gradually became successful.

248. Therefore, this undertaking in agriculture is to be pursued by all great men of sharp intelligence to get permanent joy.

## 6. Procurement of tools, implements, and other resources

Kashyapa [further] advises:

249. An intelligent agriculturist, expert in the knowledge of land characteristics, should begin the farming activity.

entertaining good thoughts on an auspicious time at the beginning of the year.

250. For achieving success in his undertaking he should, after meditating on the trinity of gods, revere in his pure mind Goddess Earth, and the goddess of grains.

251. If he is in the process of acquiring the resources he should worship with devotion the cow-shed or the place where cattle are to be tied plastering it with cow-dung.

252–253. After furnishing it with a tying post made of strong wood either of *tinduka, tinisha,* or *sarjaka* or with the cow-tying chains, etc. he should decorate it specially with sandal-paste, flowers, etc. and beautify that place.

254. After circumambulating it, the wise man should make the cows enter and walk over that place. He should select cows with auspicious marks for this purpose.

255–256. He should also fill the place in the cattle-shed on an auspicious moment with oxen and cows with their calves. The oxen with white bodies, with the tops of their horns adorned with gold or some other metal and decorated with sandal-paste should also have auspicious marks. He should also fill it [the cattle-shed] with grass, herbage, straw, and felicitous water-pots.

257. Alternately, experts should buy white bulls recognized by auspicious marks, or cows and buffaloes and tie them there.

258–259. Then in an auspicious place, they should keep plows with ropes and plows with other accessories like plowshare, etc. The plows should be made of strong timber. They should be adorned (= worshiped) with perfumes, sandal-paste, *kumkuma* (saffron), mango-leaves, etc.

260–261. After having worshiped the goddesses of grains, earth, wealth, speech, Gauri, Indra (= Lord of Gods), Varuna (= Lord of Waters), and Kubera (= Lord of Money), they should go to their respective fields, along with the bullocks.

262. Land should be plowed on an auspicious day and time, with good plows first in the auspicious northeast corner.

263. It may also be plowed in the southeast side, or in rare cases in the western side, and then water should be continuously filled for good plowing.

264. The agricultural expert should get the first plowing of the land carried out, especially in his own field, with a plow pulled by oxen.

265. Thus in due course the field would be plowed four or five times over six days, or a little longer.

266. The lumps of clay and wooden pieces, etc. should be thrown out; and cow-dung, goat-dung, and compost should be spread there to increase the potency [of the land].

267–268a. Spades, lancets, small horns, knifes, and other [instruments which can be] used in agriculture, as told

in the science of implements, all this should be procured skillfully, [including] sickles and instruments for removing stubble.

268b–269a. Great sages have advised that when first rain clouds are visible on the horizon, it is the best time to plow the field.

269b–270. One should fill up one's field through the opening of a canal and plow the field in a period favorable for crops, [this is what] sages have said.

271. Therefore, an expert in agricultural operations should first undertake plowing of land on a good day and time skillfully throughout the country in accordance with the advice of friends.

## 7. Plow worship

Kashyapa [further] advises:

272. Even before plowing, farmers knowing the [salient] marks should undertake worship of the plow and other [instruments], especially of the oxen and [other cattle].

273. Worship of the field or land with pure water, sandal-paste, etc., incense light offering, etc. yields [good] results.

274–276. [One should pray to the goddess thus] "O goddess Earth! I bow to you! O all-enduring Earth, now I start agricultural [operations]. O [goddess of] good resolutions, be pleased [with us]. Whatever plowing, beating, that I [shall] do with you, O goddess, please excuse me, [and] make me [lord of] great success. They say you are the mother of all living beings; therefore, O goddess Earth, give [us] immeasurable yields on this field."

277. Thus praising and praying, the farmer should circumambulate with salutations, Goddess Earth, darling of Lord Vishnu.

278. Praising the quarter-deities and protectors, as also the life-giving Sun, he should make a good start of plowing the field.

## 8. Worship of bullocks

Kashyapa [further] advises:

279. [One should praise the bullocks thus] "O son of Surabhi (= the Divine Cow), possessing great strength, king of bullocks, with immeasurable luster, and sinless one! Render help to me in the process of plowing the land."

280. "I worship you today with fragrant garlands and flowers, etc.; be a giver of [good] results to me. O meritorious one! Welfare to you always!"

281. "I strengthen you with [due] regard with straw, tender grass, and water; out of God Sankara's favor make me always successful."

282. "You [please] always adorn my cow-pen by producing progeny of equal strength and vigor. I shall rear you with [due] respect."

283. "O king of bullocks! You alone are the cause of

the rise in prosperity, grains, etc.; you alone are the form of righteousness. Therefore I rear you."

284. "Be pleased to bestow favor on me so that the *devayajnya* and the *bhutayajnya* which I perform will become fruitful. You [please] pardon me my faults."

285. Thus praying, and worshiping the bullocks, one should see to it that they are not made to work until they are weary or completely exhausted.

286. Whatever causes pain to their minds is destined to bring in contrary results. Therefore, one should not employ bullocks in agricultural work [when they are] fatigued. Great sages have said that only then the worship of bulls is meaningful.

## 9. Characteristics of good cows and bullocks

Kashyapa [further] advises:

287. Cows and bullocks radiant with good characteristics are said to be auspicious to the owners; they [also] give stability to the country.

288–289a. Those bullocks that reproduce oxen are fit for agricultural operations; those that are white in body, a little tall, with attractive eyes and deep voice are the ones that belong to the Brahmin fold.

289b–290a. Those bulls that are red, extremely tall, with deep voice, and furnished with fiery energy and strength, belong to the Kshatriya fold.

290b–291a. Those that are endowed with white and red spots, adorned with similar circles, not very tall or very short, belong to the Vaisya fold.

291b–292. Those that are dark in body, not very tall, and invigorate with strength of anger, belong to the Sudra fold. All these are recommended as fit for agricultural operations.

293. The pair of bullock's horns, which is not very long or thin, is auspicious. That [pair of] horns which is devoid of any mutual dissimilarity is well-spoken of.

294–295a. [Similarly] hooves of the bullocks which are strong, which are neither too thin nor too long, and which are not crooked are stated to be good. Graceful gait and long tail are also signs of a good bullock.

295b–296a. [Being] not very plump or lean, ability to carry [heavy] load, kind disposition while working are the best virtues of bulls.

296b–297a. A bullock, white in hoof, horn, forehead, and tail, adorned with shades of other colors is propitious, and giver of growth.

297b–299a. Those that are of pleasing nature, cheerful, shining with lustrous colors and endowed with auspicious circular marks give special growth in money and grain. Bullocks equipped with lines of thin hair, deep voice, and beautiful eyes are believed to bring good luck.

299b–301. [Those] bullocks, which are of red hue, endowed with big horns, [but] devoid of luster and strength, and combined with [the defect of] faltering

gait, submissive to anger and sleep, of lean body and smoky color, gluttonous, pale, exceedingly short, of hard body and cruel sound, should be discarded [as] vile bullocks.

302. Those bullocks, which are of purely white or red body, are auspicious and said to bring in growth of money, grain, etc.

303. [In short] bullocks, which are devoid of faults and endowed with [good] qualities, are [said to be] of pure stock; these should be especially procured by farmers for ensuring welfare.

304–305a. Similarly, farmers should also tend cows having good marks as also buffaloes, and she-buffaloes giving abundant milk. In many ways, rams and goats also give valuable help for agricultural work.

305b–306. Bullocks and other cattle decided as devoid of any fault by experts in their tests coming down by traditional wisdom should be protected by all means for the purpose of agricultural success.

307. They should be taken care of by giving wholesome food everyday in due time, by fondling and by protecting from diseases.

308. A wise farmer should assign to them a cow-shed which would nourish them well. Bullocks of the best quality form the primary assistance in agricultural work.

309–310. Therefore, farmers [should tend] cows especially of good stock everywhere in villages and in towns also. Cows endowed with auspicious marks should be tended by farmers in hundreds in villages and even in towns.

311–312a. By [giving] tender grass and water, fondling, and protecting them in all ways, there would ensue our attainment of religious merit, fulfillment of desires, and economic [prosperity]; [there would also be] mitigation of diseases as also protection of children, old people, and others.

312b–314a. Rain undoubtedly falls in that country where a thousand cows are tended affectionately. [Sage] Bhargava has said that gods get highest pleasure from protection and donation of cows and this leads to the welfare, etc. of the subjects.

314b–315. Therefore, farmers should not fall short of efforts in protecting herds of cows in forest regions and in villages. They should do it themselves or employ servants or better still, the cowherd boys.

316–317. It is specifically important that every year cows be worshiped on an auspicious day. Worshiping them with sandal-paste and flowers everyday in the evening is said to bring in success and good fortune [and as] described in all science books it is helpful for good progeny, and conducive to success in the three aims of human life.

318. Cows, goats, bullocks, and other cattle that are actively assisting should be placed under shade [of trees] during hot summer at noon and protected by the wise [farmers].

319. During cold season they should be protected well in cow-pens by [providing] beneficial food, [not only] for [our own] welfare but also for [the good of] royal family.

320. Protection of cows has been stated to be a religious duty of the guardians of land. Protecting them from thieves and villains and donating them has been held as yielding great success especially in agricultural work.

## 10. Season of farming and determining land for rice and pulses

Kashyapa further advises:

321. Those intelligent people knowing the order of agricultural operations [prevailing] everywhere in this world should take care of bulls, buffaloes, cows, and dependent servants conversant with [respective] duties.

322. They should then undertake farming as per the plan.

[Verse 322 has only one line.]

323. They should in due course, develop the yielding capacity of their fields. In this context, they should first plan the proper season of farming for the region.

324–326a. In regions like Kasmira, Vanga, Nepala, Panchala, Kosala, Kuru, Virata, Avanti, Malava, Saka, Sindhu, Sauvira, Surasena, Chedi, Konkana, Andhra, etc. farming should be undertaken during the rainy season.

326b–328a. If in the hot season like *Grishma* water is available for the field from canals on rivers from the mouth of a stream or drain or reservoir of deep water, [in short] wherever there is provision of water in whichever season farming can be undertaken there in that period for yielding good results.

328b–329. An intelligent farmer should plan [his] farming wisely, taking into consideration the rise of clouds [in the sky], drizzle of water, deep reservoir of water, and abundance of canal water, and also the type of land.

330–332a. Fields are divided into two [categories] according to their nature. The first [category] is *shali* (rice) field, said to be the best by sages, is [located] on various sites like banks of rivers, villages, forest regions, and also on the slopes of mountains and on the lower and higher planes. The second [category] called *adhaka* (pigeonpea) land is quite rewarding, though of a mediocre quality.

332b–334a. The *shali* (rice) field is by nature full of water, described as completely slimy, [containing] extremely soft clay, covered by lines of branches of canals and streams, and drizzling with their water, with a small protective wall all around formed by clay.

334b–335a. Its situation is determined by closeness to the threshing ground, or to a line of other *shali* (rice) fields or to the localities of the village.

335b–336. The canal from which it receives water may have its bed sloping towards the east, west, south, or north. Many times it is evenly leveled.

337. In some cases its water flows from one field to another. The situation of the *shali* (rice) field is thus determined by these various factors.

338. Those *shali* (rice) fields that are full of water from the beginning of the first plowing of ground till the period of *vrihi* (rice) production are known to be yielding full reward.

339. The highland situated in the residential villages, etc. and on the banks or even in forest regions called *adhaka* (pigeonpea) field is said to be secondary.

340. *Chanaka* (chickpea) and *adhaka* (pigeonpea) grow on a small quantity of water. Nobody has stated any provision of water canals, etc. on this [field].

341. It is fit for plowing by sprinkling very little water because during the period of sowing seeds [also], it is filled with little water.

342. Thus, water [provided] in a proper season supplies life [or sap] to the seeds. The *adhaka* (pigeonpea) field is said to be equipped with these and similar qualities.

343. The collection of seeds by the farmers suitable for the *shali* (rice) field and the *adhaka* (pigeonpea) field has been described to be manifold.

## 11. Procurement of seeds

Kashyapa [further] advises:

344. In ancient days, on request of [Goddess] Earth, Lord Brahma, the Father of the Worlds, created various seeds and became thoughtful.

345. Knowing his mind, respected Goddess Earth asked [Him] with pleasure the procedure [in this regard] for the accomplishment of the happiness of living beings.

346–347. "O Creator! Now you have created these various seeds and [also] placed [them] in me immediately with due respect [to my request]; undoubtedly, these will be sprouted because of your great favor and especially that of [God] Indra."

348. "Definitely there will be rainfall from clouds every year. In appropriate seasons, people will be benefited by rains everywhere all around."

349. "They will sow seeds especially in productive fields and will be getting complete rewards and will also be nourished and delighted."

350. "Agricultural experts also in various countries on this earth will always be pleased. [There will be] immense delight to gods, and rise in the sacrifices, etc."

351. "Through the gratification of subjects and guests by food, etc. and satisfaction of the cattle proper to the season, the *bhutayajnas* will be accomplished."

352. Thus addressed by Goddess Earth, and promising the welfare of all living beings the creator uttered the words, "May it be so!"

353. Since then intelligent human beings in all places on this earth knowing [well] the agricultural operations have [been] taking care of the various seeds.

354–355. Great sages have indicated the seeds of *shali*

(rice) and other [cereals] fields as the first, pulses, etc. as second, the series of vegetables as the third, and the class of creepers and flowers has been declared as the fourth. All this agricultural activity has thus been decided as fourfold.

356. [It is] nourishing and fruitful especially for human beings, giving satisfaction in all seasons, and is also gratifying to gods.

357. It is the vital source of life to cows, bulls, camels, horses, elephants, and other animals, as described by great yogis and saints like Narada and others on this earth.

358. Great kings have continued agricultural work devoutly in their respective countries and the same has been taken care of by their administration.

359–360a. From that time onwards, capable Brahmins, warriors, traders, laborers, and others started agricultural operations on good fields suitable to the season in manifold ways [giving] prominence to seed as described.

360b–361. Therefore, intelligent people, leading experts in agricultural business should decidedly plan collection of [quality] seeds skillfully. For success [in this endeavor] I shall [now] name the seeds in due order.

362. Rice is divided by experts into three main varieties based on their taste and color: *shali, kalama,* and *shastika.*

363–364. *Kalama* is slightly thick, white, and with a surplus sap. *Shastika* is made tasteless by the creator. *Shali* rice is said to have twenty-six varieties by experts depending on the quality of the land in different regions.

365. Vigilant farmers should make every effort to procure and preserve the seeds as the sowing of these various seeds has to be undertaken in seasons suitable for the particular variety.

366. *Shweta shali* (white rice), *rakta shali* (red rice), *sthula shali* (thick rice), *deergha shali* (long rice), *kalama* of white color and sweet taste—

367. —*kalama* of red color, *kalama* of thick form, *kalama* of long form, *vrihi* (rice) of *sambaka* variety called *hema* (golden)—

368. —*kapisha sambaka* (reddish brown rice), *rakta sambaka* (red rice), *krishna sambaka* (another variety of black rice) considered to be extremely tasty—

369. —*shuka vrihi* of broad type, being yet another variety, *sthoolkaya vrihi; ghana vrihi,* a solid or weighty kind of rice, and *palasa vrihi,* [these two are] unctuous with sap—

370. —*svada vrihi* (sweet rice) [also] excessively so, *phala vrihi, draksha vrihi* (vine rice), wild-grown rice of white and black variegation—

371. —barley-like [also] white, and black, as also thick type, another one called *sammara vrihi,* which yields abundant crop [or which swells much on boiling].

372. *Kala vrihi* (sweet and nourishing rice), *sita vrihi*

(white rice), and *peetavarna vrihi* (yellow rice) which removes indigestion.

373. Thus these are known to be the twenty-six varieties of [all] classes of *dhanya* (rice). The seeds of all these varieties have to be preserved.

374. The preservation in one's home of well-ripened seeds dried in the heat of the sun on the threshing ground is the most important work leading to good results.

375. It has also been prescribed that alternatively the kings should [arrange] the preservation and distribute the seeds in due time. The collection of seeds, which is a great credit is [in fact] the first valuable reward of agriculture.

376. It gives satisfaction to men as well as gods, and is fit to be gifted away. Therefore, farmers should better preserve the seeds expediently.

377–379a. These are the seeds which give complete results in three months or in [some] places four months; some give [the results] in five months, and some in six months and rarely in seven and eight months at the most. Great sages have come to the conclusion that well-ripened seeds yield good fruit.

379b–380. Therefore, in one's country one should take up the farming of *shali* (rice), etc., in the fields depending on the availability of water, to ensure success. In some places it depends on the procedure followed in this regard by forefathers.

381–383a. In other [places] it depends on the rise of clouds and the pouring out of water in [that] land. [In short] agricultural operations are recommended [to be done] depending on the region and season. It is beneficial to the kings as well as to the subjects. It is also a source of happiness to the birds and the cattle. In fact, farming brings happiness to every living being.

383b–384. Similarly seeds of pulses are to be procured and preserved. They are seeds of: *masha* (black gram), *mudga* (mung bean), *chanaka* (chickpea), *godhuma* (emmer), *tila* (sesame), *kiraka, kodrava* (kodo millet)—

[Note: *Godhuma* (emmer) is referred as wheat throughout the text.]

385. —*yavara* (sorghum ?), *kuluttha, ikshu* (sugarcane), and *pundra* (red sugarcane); [all] these various seeds are divided in the order of their class [or category] and taste.

386. Seeds of various kinds of spices like *jiraka* (cumin), *sarshapa* (mustard), and *marichi* (black pepper) should similarly be collected and preserved.

387. Where the crop of *tula* (cotton) or *eranda* (castor) is fruitful, preservation of those seeds is also worthwhile.

388–389. Seeds of *patolika* (cucumber), *vartaka* (eggplant, brinjal), *jatika* (nutmeg ?), *rashi-jatika, vallika* and its wild variety as also those of the several varieties of *shavaka* are also to be preserved. Similarly there are vegetables of different kinds with a variety of color, taste, and category.

390. Expert farmers should also collect and preserve the seeds of *kushmanda* (ash gourd), *kalata, kustumba* (coriander), *kata,* and *dhanyaka* (coriander), wherever their farming is advisable.

391–392. *Haridra* (turmeric), *shunthi* (dried ginger), and other bulbous roots, *shakuta, rasaka* (grape), and especially *kadali* (plantain)—preservation should be done by experts in agricultural work.

393. It is also advisable to preserve the seeds of *ela* (cardamom), *draksha* (grape), *nalada* (= *usira*, vetiver; syn. cinnamon), tasty *nagavalli* (betel leaves), *puga* (areca-nut), and *kramuka* (areca-nut).

394. The seeds of flowers like *mallika* (Arabian jasmine), *peetapushpa* (champac), *kunda, atimukta,* and *champeya* should also be preserved.

395. Seeds of trees like *shigru* (drumstick tree), *bhurjaka, karanja* (pongam), *shami, naktamala,* and *devadaru* (deodar) should also be preserved.

396–398. *Bibhitaka* (belleric myrobalan), *priyangu, amalaka* (Indian gooseberry), *pinditaka, nimba* (neem), *likucha* (lakoocha), *shirisha* (lebbeck tree), *ashoka* (asoka tree), *dadima* (pomegranate), *shriparna, tamala, sindhuvara, kapittha* (wood-apple), *jambu* (Java plum), and *saptaparna* are some more trees the seeds of which the farmers should preserve as they yield good results.

399. So also *udumbara* (cluster fig), *chaladala* (pipal), *tinisha, paribhadraka* (coral tree), *palasha* (flame of the forest), *madhuka* (mahua), *vata* (banyan), *plaksha, rasalaka*—

400. —*tinduka, tilaka, nipa* (yellow teak), *arjuna* (arjun), *sarjaka, badara* (jujube), *pilu, jambira* (lemon), and *punnaga*; similarly—

401–402a. —*vamsha* (thorny bamboo), *kasha* (thatch grass), and the varieties of *matulunga* (citron) are the varied trees which with their leaves, flowers, and fruits are the benefactors of mankind and especially of the birds.

402b–403a. Preservation of the seeds of all the big trees like *vata* (banyan) and others listed here is advantageous.

403b–404. The entire range of seeds fully ripe must first be dried in the sun and the farmers should then preserve them in various pots, in heaps of husk, as also in bowls.

405. The collected seeds should not get spoiled by rabbits, rats, and cats, and also by drops of water trickling down from any source of water or by wind, rain, etc.

406. The seeds are to be preserved in the house or in the threshing place, so as not to be spoiled by several other faults too.

407. Taking care of good seeds religiously is conducive to the benefit of farmers [as has been] said by great sages.

408–409. Men well-versed in agricultural operations—

may be Brahmins, Kshatriyas, Vaisyas, Sudras, or of mixed castes—should purchase or collect seeds of [grains like] *shali* (rice), etc., vegetables, trees, roots, etc.

410. They should then get the different types of their fields situated in their regions plowed by bullocks.

411. Following the prescribed procedure of sowing, they should skillfully sow them there in due course after they are sprinkled with water and sprouted at a proper time.

## 12. Plowing for sowing seeds

Kashyapa [further] advises:

412–414a. Experts in [agricultural] science have pointed out so many procedures of sowing seeds. In some cases plowing by auspicious bullocks in *shali* (rice) fields has been directed. For this [very] purpose growing of these seeds of different varieties of *vrihi* (rice) as also of the bulbous roots, etc. is to be done first in [one's own] place as per the advice of the experts.

414b–415. In due course plowing of the land be caused by bulls in the watery field different from it [i.e., the place], in an auspicious field soaked with water, arranging a number of divisions [of the land] fit for scattering the seeds.

416. Equalizing the placing of sprouts skillfully as far as possible, they should be planted as per the tract.

417–418. Plowing of land by oxen, leveling with the [help of] [axes and] spades, and assimilation with the paring plow of fields has been ordained in pleasure-groves, gardens, and royal parks, either on the outskirts of villages and towns or inside.

419. The experts have advised plowing, furrowing, or digging for the sowing of seeds as per the requirement.

420. One should devise a pit to plant the roots, etc. and various creepers and trees like the *kadali* (plantain), etc. which have been mentioned before.

421. They are cultivated either by planting the saplings or by placing the roots. Those should also be planted skillfully and the creepers should be made to grow by different means.

422. All this cultivation is said to be fruitful by sages who know the principle [behind it] when undertaken on a leveled ground of good quality treated with proper manure at the proper time.

423–424. Therefore, plowing of land in *shali* (rice) fields and places for growing creepers is recommended. An expert cultivator should undertake plowing, digging of pits, and furrowing as is suitable for the ground selected for growing vegetables, gardens, or trees.

425. An expert may also direct the farmers to sow the seeds in a land gradually dried due to the sun-rays after being sprinkled with water first.

426–427. Thus in planting creepers and trees, in placing the *kadali* (plantain) roots, and also in planting sprouts, one should arrange all the agricultural operations such as plowing, etc. skillfully and [following] the traditional advice, [which will] yield [good] results.

## 13. Cultivating procedure for grain crops

Kashyapa [further] advises:

428. Cultivation of *shali* (rice), etc. would be best in agricultural fields where river water is supplied in countries like Kosala.

429. Wise farmers should first start with a resolution to collect the seeds of *kalama* (rice) in sufficient quantity in order to take it up, as advised by the sages.

430–431. Only after filling in, at the outset, sufficient measure of water drawn from places like lakes and rivers [and] from the mouth of streams to the crop fields in due time, plowing [the field] by bullocks is recommended. Then the crop fields [become] full of water.

432. Plowing from northeastern corner or in some cases from the east or west is auspicious.

433. Thick clusters of the sprouts of *shali* (rice) previously grown should be dug out serially.

434. Fastening them in clusters, they should be planted in the farms already softened by plowing, and full of plenty of water and mud [puddling].

435–436. Servants should be employed to do the planting, line by line in the fields which have already received sufficient manure of goat-dung or cow-dung or the tendrils of creepers. After this a little water should be left in the farms.

437. An outlet should be devised for the excess water to flow off. Effort has to be made to protect the sprouts of grain so as to avoid damage to them.

438. They should be protected in such a manner that the entire planting operation yields the desired result. Planting of the [rice] seedlings should be arranged thus.

439–440a. Damage is caused to the seedlings due to several reasons like [excessive] showers, etc. An intelligent [farmer] should sedulously arrange a fresh adjustment of sprouts in those portions for good results.

440b–443a. In the villages, forests, and other places, where water reservoir is shared by two to five families, the plowing operation of all those grain fields should be undertaken at the same time with the help of ten pairs of bullocks. This causes growth in the yield. Such collective sowing of seeds experimented with many yoked [bulls] by the villagers with consensus is said to bring in [good] profit.

443b–445a. Similarly, especially in *shali* (rice) fields with muddy water, in villages, towns, forests, and woodlands, after the planting of *shali* (rice) seedlings has been completed, for draining off surplus water several outlets can be created simultaneously when the fields receive water from the same canal.

445b–446. The rows of *shali* (rice) seedlings on the surface of the earth are divinely ordained to take root for growth after having floated for seventeen days on the plowed field.

447–448a. Then the appearance of new shoots outside

is an auspicious sight. The line of sprouts appears to be graced with the excessively beautiful luster that is seen on the plumage of parrots or on the body of a girl attaining youth.

448b–449. After one month a gradual growth of leaves is distinctly seen in the *vrihi* (rice) fields. The new growth of sprouts on all sides is also adorned with the same luster.

450–451. Watered everyday it will give the [desired] results. However, at that very time, weeds of grass are sure to grow there in the muddy water in [rice] fields. [And] these are the enemies of the crop as warned by the great sages.

452. Therefore, farmers have to get rid of the weeds of *munja* and other types of grass along with other harmful elements very carefully.

453. Weeding out this harmful growth reducing the returns to a large extent, right from the roots is always good.

454. Expert farmers should, at that time, fill the fields with water and uproot the grass line by line.

455. The servants should everyday destroy this enemy wherever it appears in the [rice] fields in the same manner.

456. With this enemy completely brought under control by the persistent efforts of the farmers, the lines of *shali* (rice) plants start shining once again with healthy growth.

457–458. Then in the second month, the growth of *shali* (rice) is definite. Even at that stage, if some damaging factors remain in [rice] fields, skillful [effort to] ward them off would yield great result in the case of all crops.

459–460a. For all those varied categories of grain of diverse species and forms mentioned before, like *shweta shali* (white rice), *rakta shali* (red rice), *kalama,* etc., agricultural operations are alike.

460b–462a. First plowing the fields, then planting the seedlings, followed by removing grass and woody matter, repeatedly and carefully; filling the field with water and protecting the agricultural crop, experts have decided these operations of the same kind involving the same activities.

462b–464a. However, varieties [of rice], like *shali, samba (sambaka),* and *kalama,* etc. ripen within three or four or five or even six months in the same field due to the difference in their variety and color. Some take [even] more [time].

464b–465. Therefore, farmers [will have to] know the order of appearance of the ears of those crops. Depending on that, experts have advised the filling of water everywhere in the country.

466–467. When a mass of ears, full of milky juice and slightly bent at the top appears on the lines of plants the crop has to be protected especially from the parrots. This too is similar, all over the country.

468. Thus the row of ears internally filled with milky juice becomes gradually possessed of sap, [and] that sap gives rise to *tandula* (rice).

469. Up to that [period] special provision of water for them is recommended and said to be beneficial; otherwise it is destitute of fruit.

470–471a. Therefore, knowing the course of the constantly growing milky juice inside the grains, etc. farmers should water at the roots of the plants in due order at the time, for the increase of sap.

471b–472. In some places the provision of water has to be diligently arranged from river or a pond or a deep pool or well. Then it is said to be successful, leading to the happiness of living beings.

473–474. Through the blessing of earth and also through divine volition, various seeds sown in agricultural fields gradually develop by themselves and yield fruit naturally shining forth in that form on the surface of the earth.

475. Protection from rats, insect pests, parrots, wicked persons, and animals is said to be yielding special results.

476. The villagers and the agriculturists being amicably disposed towards one another should determine the age of *kalama* and other varieties [of rice] from their appearance.

477–478a. Direct experience [of work in the field], the strength of the seed, and the grade of land, can help to decide when the *shali* (rice) crop would be ready. It should then be protected by the fellow-workers. The crop serves the interest of living beings. As such, it should be revered by circumambulation, etc.

478b–479. When, however, the mass of grain has ripened in due course within the stipulated time, watering should be stopped—this has been prescribed by superior scholars of agricultural secrets.

480–481a. Experts have recommended this path to be followed in all the *shali* (rice) fields. When the ears become ripe farmers should protect the *vrihi* (rice) grains from all kinds of harm without lethargy.

481b–482a. Thus when the mass of *vrihi* (rice) grain is ripe at the tip of the leaf, the *vrihi* (rice) stalks bend down with their tips touching the ground within a period of twenty days.

482b–483a. When the farmer sees them fallen down, he should guard them in the field with the help of servants.

483b–484. When the mass of grains on the stems, of which some might have turned into a shade of golden color, is fully ripe, one should have the stems cut with nippers, etc.

485. The farmer's dependents, servants, and others should help him in cutting the spikes of *kalama* (rice) from the stems and stalks.

486. This should be done either in a single day or part by part daily. By helping each other, cutting is said to be completed more efficiently.

487. Harvesting should be done for different varieties of *dhanya* (rice) before the stalks are spoilt or damaged by rain, thieves, etc.

488. The cut-off *vrihi* (rice) stalks with their tips are to be placed on the threshing floors by the farmers through servants, dependents, etc.

489. These should be placed on the threshing floor for three to five days. Their protection is recommended and said to be of great use.

490–491a. When well-ripened stalks of the mass of *vrihi* (rice) with their ears loosened are threshed on the floor, the line of grains falling [on the ground] shines forth like a garland of spotless pearls.

491b–492. If ends of *vrihi* (rice) stalks are rubbed over again with [extra] effort or with the trampling by oxen or buffaloes, the remaining mass of [rice] grains also falls down.

493. Thus having thoroughly crushed the mass of *vrihi* (rice) stalks on the threshing floor, farmers should collect the separated [rice] grains which are solid and stuffy.

494–495a. Tender [rice] grains should be heaped after separating them from the chaff by fanning with wind raised by winnowing basket, etc. The wise [farmer] should make them spotless [bright] by drying the same in the sun's heat.

495b–496. Allotting one share to gods and king in order, and also one part to the Vedic scholar duly, donations are given or feeding for the servants is arranged in some places by farmers.

497. They should then take the remaining stock of [rice] to be stored in the house and protect it with skillful efforts in strong [stone] vessels.

498. It may also be stored in well-baked earthen pots or in vessels made of strong glass, or in the hollows constructed under the floor for storage.

499. In some regions they are stored in containers woven with ropes and plastered with mud. In some cases, one should design a vacuity in the firm ground on land.

500. *Vrihi* (rice) and other grains should be stored there equipping it with stairs and protected ingeniously from water, thieves, and insects.

501. The grains should also be protected from rats and wicked animals [making the place] free from fear [of any kind]. Thus *kalama* and other grains should be protected with great care.

502. Expert farmers are instructed to similarly protect their seeds dried in the sun.

503. When the farmers have carried the mass of grain to their homes, they should collect the stalks of *vrihi* (rice), etc. and dry them in the sun.

504. When the stalks with tender fiber are trodden by the feet of bulls, their mass is reduced. The same should

be collected and stored by the farmer in his house or in the cow-shed.

505–506. This too, should be carefully preserved as the same can be used as fodder for cows, bulls, buffaloes, female buffaloes, goats, and deer in some places. Their life is sustained by these stalk-bundles as stated in the *Shastras.*

507–508. Therefore, everywhere expert farmers derive immense happiness by putting in sincere efforts as per the scientific directions to produce food grains on which subsist the human beings and to preserve the stalks on which subsist the quadrupeds.

509–511a. Brahmins, Kshatriyas, Vaisyas, Sudras, the miscellaneous castes, and others who are engaged in agricultural operations as per advice of the Aryans, in accordance with regional customs, and using devices [learned] out of their own experience should deposit the yield of the farmland in their houses on auspicious time and moment.

511b–512. They should then worship goddess Lakshmi in the form of grain and money, with scents and flowers as also with pure articles laid down in the science. They should then feed the Brahmins and give them gifts in a liberal manner.

513–514a. They are then blessed with success, happiness, excellent prosperity on this earth, and divine favor, living happily with their children, wife, grandchildren, and family [members].

514b–516. Men doing agricultural operations on various *shali* (rice) fields dexterously in their own country, in the recesses of forests, in villages, in good fields, and rarely also in choice places with constant [sources of] water undertake second cultivation in a year and reap the benefit thereof.

517. This second cultivation in a year is fruitful everywhere and is therefore recommended on various types of farmlands.

518. For taking up this second operation it is essential to raise the fertility of the soil which can be achieved by using manure of goat-dung, cow-dung, and vegetation [green manure].

519. Every activity of farming is stated to be fruitful and worthwhile only when the *shali* (rice) fields are supervised daily with due regard.

520. Following the right farming procedure with composed mind, and by taking good care of the cattle farmers reap additional yield.

521. Therefore, farmers knowing the proper procedure of farming should make up their mind to cultivate the second crop, after mutual friendly discussion.

522–525. Taking good care of the cattle, servants, and seeds; maintenance of canals, water-tanks, lakes, wells, etc.; keeping the implements like spade, sickle, etc. in good working condition; and guarding the threshing floor, fences, and the fields throughout the year are the solemn

duties of every farmer. Realizing this and conducting himself accordingly as per the traditions of the particular region, the agricultural profession becomes a source of great happiness for a farmer, conferring on him the fruits of the three aims of life, viz., Dharma, *Artha*, and Kama.

## 14. Cultivation of pulses and other crops

Kashyapa [further] advises:

526. *Adhaka* (pigeonpea), *masha* (black gram), *chanaka* (chickpea), *mudga* (mung bean), *kuluttha* (horse gram), and *tila* (sesame) are also to be cultivated.

527. Seeds of *marichi* (black pepper) and *jiraka* (cumin) should also be sown in some places. All these are useful in cooking soups, sauces, etc. (*vyanjana* = any dish which adds taste to rice).

528. Food of various kinds on earth is prepared with *tandula* (rice), etc. derived from [paddy], for the protection of life; the science which describes this procedure is [called] *Pakashastra.*

529. It was expanded by king Virasena, as also by his son Nala, and by the great sage Garga.

530. The course prescribed there of food and condiments, etc. is supposed to be varied. Those various dishes add to the taste [of rice].

531. It is cooked with the help of *masha* (black gram), *adhaka* (pigeonpea), *marichi* (black pepper), salt, jaggery, etc. and is said to be conducive to the nourishment and [good] health of man.

532–534a. During the season of crop cultivation, clever farmers decide to sow the seeds of *adhaka* (pigeonpea), *masha* (black gram), *mudga* (mung bean), etc. as per the season, even in the fields inside the forests or in the villages, after plowing and sprinkling them with rain water or with just a little quantity of water from the canal, for this purpose.

534b–535a. Science recognizes big and small varieties of *adhaka* (pigeonpea), *masha* (black gram), *mudga* (mung bean), *tila* (sesame), and *chanaka* (chickpea).

535b–536a. In [various] elevated places of land, sprinkled with water, sowing of the seeds of *tila* (sesame), etc. is advised by the *Krishishastra.*

536b–538a. When four, five, or six days have elapsed, sprouts of pulses emerge and would be seen on the plowed site. Experts of science have decided it in accordance with the quality of the land. It is a matter of personal experience of the experts that sprouting of seeds of pulses is possible on level land, too.

538b–539a. The *vrihi* (rice) field on the earth is said to be a watery [fertile] land. The field of *masha* (black gram), etc. is, however, said to be a highland.

539b–540a. Therefore, farmers should undertake cultivation of pulses on highlands. So said [sage] Bhargava.

540b–541. But Kashyapa in this text is of the opinion that sowing of seeds of *masha* (black gram), etc. can be

successful in the *vrihi* (rice) fields too, depending on the practice followed by the wise or on facility provided by the land situation.

542. Depending on the regional practices or on the season and site, whether in the watery lands or in the highlands—

543–546. —the seeds of big varieties of *adhaka* (pigeonpea), *masha* (black gram), *mudga* (mung bean), *chanaka* (chickpea), *tila* (sesame), *godhuma* (wheat), *kuluttha* (horse gram), *kira, kodrava* (kodo millet), *yavara* (sorghum ?), *marichi* (black pepper), *tula* (cotton), *eranda* (castor), *jiraka* (cumin), *sarshapa* (mustard), etc. should be sown in the fields plowed and leveled, line by line in the watered lands or in the tablelands.

547–548. Expert farmers should broadcast some seeds moist with water, on the furrows and some on the rows [divided by] a variety of line [marks], and also a range of some good seeds not dampened in water, in due time in deference to their regional tradition.

549–550. When the sprouting of seeds sown everywhere on the twofold portion of land is in sight, or after one month, [or] slightly more or less time, agriculturists will see plentiful grass everywhere on the ground.

551–552. They should cut it with hands and lancets, etc., rend it asunder by taking it out from that place with their roots, and sprinkle water on the land.

553–554a. If there is plenty of rain after the scattering of seeds on the ground, the destruction of seeds is certain. Therefore, it is better to sprinkle very little quantity of water. The great sages have prescribed it to be effected with channel-water.

554b–555. When the grass and other [factors], which [would] cause destruction of seeds of *tila* (sesame), *godhuma* (wheat), *chanaka* (chickpea), *masha* (black gram), *mudga* (mung bean), *adhaka* (pigeonpea), etc. are well-removed, sprout after sprout starts appearing on the branches and secondary branches.

556–557. At that stage plenty of manure should be mixed with the soil near the roots of the plants as in the case of *kalama* and other varieties [of rice]. Once the army of enemy in the form of weeds, bulbous matter, etc. is killed, the growth of the branches and stalks of *masha* (black gram), etc. is almost certain. Then only the beauty of plants and flowers, etc. will manifest.

558. After the appearance of flowers, the line of pods becomes visible and when the pods turn brown, the grains of *adhaka* (pigeonpea), etc. are formed.

559. The crop of *masha* (black gram), *adhaka* (pigeonpea), *chanaka* (chickpea), and other pulses and *godhuma* (wheat) ripens after a period of three months or more.

560. The essence inside the ears/pods is said to be produced due to the skillful watering in the soil near the root.

561. Production of *masha* (black gram), *adhaka*

(pigeonpea), *tila* (sesame), etc. is thus caused everywhere by the grace of God as per the *Shastra.*

562. When the internal essence is condensed, gradually the row of *masha* (black gram), etc. will be seen as ripe in each line of grains in the pods.

563. Experts in farming instruct the farmers to observe at that stage the falling of leaves, etc., falling caused by senescence, and bending of plant heads.

564. Thus the sprinkling of water should be done to suit the timely development of *tila* (sesame) as also of *godhuma* (wheat) on the highlands.

565–566a. The appearance of ears/pods, etc. as also the period required for it depends on the varietal difference, form, and method of cultivation in some places. Whether a particular variety is good for cultivation or not should be decided in the context of the field.

566b–568a. When the grains of *adhaka* (pigeonpea), etc. in the pods become ripe, harvesting can be taken up in that part of the field where they are fully ripe. Servants, valorous men, and guards must be appointed for protecting the crop when ripe. As in the case of [rice] in this case also it results in plentiful yield.

568b–569a. It has been prescribed that ears of *kanisha* (corn) which have been broken and/or snapped on the threshing floor should be crushed with sticks, etc. and dried in the sun.

569b–570. Farmers should preserve stalks of *adhaka* (pigeonpea), etc. for feeding quadrupeds like bulls, horses, etc. heaping them on the threshing floor or in one's own home in a place convenient to oneself.

571. It may also be stored in parts of the cow-pen or courtyard, if a proper place is found. Setting apart the stalks of *adhaka* (pigeonpea) is always fruitful.

572–574a. The prudent farmer should collect and save *vrihi* (rice) stalks, husk, etc., stalks of *adhaka* (pigeonpea) as also leaves and stems of *masha* (black gram), *godhuma* (wheat), and *chanaka* (chickpea), which provide nourishment and are conducive to health and happiness of the quadrupeds, etc. in all seasons.

574b–576. The farmer should collect on the threshing floor, *godhuma* (wheat), *tila* (sesame), *masha* (black gram), *adhaka* (pigeonpea), *sarshapa* (mustard), *kira*, *mudga* (mung bean), and such other crop after cleaning them thoroughly, of *kshudragrama* [*grama*, short for *gramakanda,* meaning a kind of bulbous plant (?) or *grama* is mistakenly scribed for *grava* = stone (?)], *katu* (name of various plants ?), and *griva* (?) through the process of *pechana* (*peshana* = pounding ?), *chamana* (?), winnowing, or husking by exposing to the wind.

577. One should [then] bring home, these *chanaka* (chickpea), *adhaka* (pigeonpea), *mudga* (mung bean), etc. after cleaning them of other impurities by drying them in the sun.

578. The farmer should deposit them in different vessels and preserve them to be readily and easily used in cooking various dishes.

579. In keeping with the regional practice and using his expertise, experienced farmers should thus produce in his land these crops of *dhanya* (rice), etc., *adhaka* (pigeonpea), etc. and *marichi* (black pepper), etc.

580. They should also produce other articles of desirable form and species, fit for agriculture, considering the suitability of the land and season.

581–582a. These too can be produced either in villages, towns, cities, or in various agricultural allotments in the adjoining lands. But it is the regular agricultural undertaking which is said to be immensely profitable.

582b–583. Those eligible for agriculture should in time grow *kodrava* (kodo millet), *yavara* (sorghum ?), *yava* (barley) on wet farms as well as on highlands in every region and in every village. This grain is also nourishing.

584. The stalks and stems are life-giving for animals and other creatures. Therefore, in all countries one should grow *kodrava* (kodo millet), *yavara* (sorghum ?), and *yava* (barley).

585. Having cultivated these highly nutritive grains one should also grow *agastya* (sesbania) and *ikshu* (sugarcane) as per the suitability of the land.

586. Cultivation of *ikshu* (sugarcane) is lauded as very beneficial, being a source of sugar and molasses and also the highest life support for elephants.

587–588a. The firm stalks of *ikshu* (sugarcane) take time to grow in the watery lands as also in certain parts of tablelands. A long line of pits must, however, be dug there.

588b–589a. For *kadali* (plantain) or for *pundra* (red sugarcane), propagation by sowing seed is neither seen nor recommended by the texts.

589b–590. Farmers should plant the setts of *ikshu* (sugarcane) in the pits either in autumn or in such season as is enjoined in a particular region. After planting, they should be adequately watered. This is said to be the method.

591. When a period of ten days has elapsed, sprouts emerge from its roots, and there is production of leaves, etc. from the sprouts.

592. After a couple of months or in some cases after three months, full growth of leaves is sure to result.

593–594. The discerning farmer, expecting the growth of the stem up to the measure of a man's height or more than that, should arrange regular sprinkling of water in the pit at the root, and should protect the crop during this time assiduously.

595. *Ikshu* (sugarcane) crop should be particularly protected from wind, etc. Similarly, the procedure of *kadali* (plantain) cultivation on lands is also instructed.

596–597. Cultivating *kadali* (plantain) is always beneficial. Its varieties are said to be many. Experts in agriculture should grow *kadali* (plantain) and *ikshu* (sugarcane) in all seasons subject to regional practice.

It is stated to be always beneficial, everywhere in the country.

598–600a. The prudent [farmer] should grow *kadali* (plantain) and *ikshu* (sugarcane) to ensure welfare by knowing the fitness of land, sometimes on the ridge of a mountain, or summit of a hill, rarely [also] on inexorable land. This is always and everywhere beneficial, as is rightly said. But one should not grow it on saline soil, or on land which may be depraved by some blemish.

600b–601. Therefore, the wise should grow *chanaka* (chickpea), *adhaka* (pigeonpea), and *mudga* (mung bean), which are primarily used for preparing soups on portions of land endowed with good qualities and guard them to bring home whatever is gained there.

602–603a. The farmer should also grow trees of *pichu* (cotton) and *tula* (cotton) even in rows, for the preparation of clothing, rarely on highland and in hot places.

603b–605. Whatever is instructed as conducive to happiness through traditional advice or by direct observation, all that a successful farmer should grow whether on the sides of land, on dregs, or on the lands outside the village, on its boundary or in places inside pleasure-groves, on the banks of ponds, or in villages on highlands.

606. Great sages well-versed in this science have directed that growing of *karpasa* (cotton trees) and [similar] other [trees] in due order is commendable.

End of Section I: description of order in cultivation of grains, etc.

## Section II: Orderly exposition of vegetable husbandry

Kashyapa [further] advises:

1–2. Those who know the order of agricultural operations, always observing royal [= state] rules, should cultivate regularly, in proper season, *shali* (rice), etc. on *shali* (rice) fields everywhere on land resplendent with good qualities, and grow similarly *chanaka* (chickpea), etc. on highlands.

3–4. Thus, the different varieties of *shali* (rice) along with pulses, etc., which provide the supplementary ingredients, are together desired to make a complete meal. However, it has been observed that they are not sufficient to accomplish the completeness by themselves in the world. Therefore, one should cultivate vegetables, etc. which are so tasty.

5–6. The farmers should grow *jatika* (nutmeg ?), *rashi-jatika, vallika* and its wild variety, *patolika* (cucumber), *vartaka* (eggplant, brinjal), *shavaka,* and several other vegetables like *kushmanda* (ash gourd), *kalataka, kustumburu* (coriander), *kalata, surana* (elephant-foot yam), and also *shakuta.*

7–8. *Haridra* (turmeric) and *shunthi* (dried ginger), both the cultivated and wild variety as also several other tasty varieties of vegetables should be grown duly for the purpose of cooking food. These, in my opinion are the main vegetables.

9. Owing to the difference in species, form, taste, and color, vegetables are given different names in different countries.

10. Farmers should grow *palandu* (onion) and should also undertake the cultivation of *draksha* (grape), *nalada* (cinnamon), and *ela* (cardamom) in their respective fields.

11–12a. On the wetlands or on the drylands, farmers should grow vegetables in the proper season and region after finding out the traditional method.

12b–13. Varieties of *tandula* (rice) are first in the priority list. The grains for preparation of soup are second. Vegetables come third; and ghee (clarified butter), milk, etc. the fourth.

14. These four together are stated to make a complete meal. This heightens the pleasure of gods.

15. This food brings stability to human life by providing nourishment and health. It sharpens intellect and enhances the span of life.

16. At the time of creation, Brahma created this earth along with the living beings, planning this food for them.

17–18. The purpose of Brahma's creation was thus fulfilled at the beginning itself. This food planned by divine wish is stated to bestow the fruits of Dharma, *Artha*, and Kama on great sages, ascetics, and common people alike, everywhere in all the countries and in diverse fields.

19–20. Therefore, cultivation of vegetables, etc. has to be planned by farmers especially in villages, towns, forests and their interiors, open places adjacent to residential areas, wherever the soil is endowed with good qualities and particularly if it has a dependable water supply.

21. Vegetable husbandry is definitely fruitful when taken up in spring, summer, and rarely in winter too.

22. One should sow the seeds of *vartaka* (eggplant, brinjal), *valli*, *jatika* (nutmeg ?), *marichi* (black pepper), *shavaka*, etc. in the plowed farms to sprout.

23–24. Seeds of *vartaka* (eggplant, brinjal), etc. dried in the sun should be sown for sprouting in land which is even richer with manure of cow-dung, etc. Experts should in due course arrange for sprinkling of water and then covering with straw [or husk].

25. After a period of three days sprouts indeed are shown by nature at the right spots!

26–27a. Within a period of twenty days the wise [farmer] should dig out the compact net of shoots and replant them suitably on the plowed land. Sprinkling of water on the roots at this particular time proves a life-giver.

27b. *Vartaka* (eggplant, brinjal), etc. should be grown in rows by preparing basins for water at the roots.

28. *Patolika* (cucumber), *vallika,* etc. which grow in the form of a creeper should be grown on hut-like props covered with grass for proper growth of a creeping plant.

29. The wise should cultivate these and such vegetables on wetlands even during summer without depending on rains. In other seasons also vegetable husbandry is beneficial.

30. The bulbs of *shakuta, surana* (elephant-foot yam), and *haridra* (turmeric) should also be planted with basins around.

31. Agriculture on fields of hot ground is productive. Thus the cultivation of the class of creepers is varied.

32. One should grow *kushmanda* (ash gourd), as also its wild variety, *ela* (cardamom), *nalada* (cinnamon), and rarely *nagavalli* (betel) too, on high ground.

33. The wise should grow *kadali* (plantain), *ikshu* (sugarcane), *nagavalli* (betel), and *puga* (areca-nut) on watery ground as also in gardens and pleasure-groves.

34. One should also grow *rambha* (plantain) and *mocha* (banana), which are fruit-yielding, *panasa* (jackfruit), *likucha* (lakoocha), *rasala* (mango), *amra* (mango), and *jambu* (Java plum).

35a. Those who are conversant with agricultural operations should also grow *narikela* (coconut) trees.

35b–36a. All these should be grown and protected in the vicinity of the houses, in gardens, on tablelands or even in wetlands; in fact, wherever place is available.

36b–37. Brahmins, Kshatriyas, Vaisyas, Sudras, people of miscellaneous castes, hunters, soldiers, everyone according to his ability, should grow plants in their lands.

38. *Dhanyaka* (coriander), *surana* (elephant-foot yam), *valli, kushmanda* (ash gourd), *patolika* (cucumber), *jatila*, and all those advised by the *Shastra*, should be grown as per the instructions.

39. First [comes] plowing of land and secondly small quantities of cow-dung should be strewn thereon. This is intended for enhancing the fertility of the soil.

40. There, on the farmland, water basins with several channels should be designed and plants of *vartaka* (eggplant, brinjal), etc. should be placed on the edges of the basins.

41. At places where *malati, kunda, champeya, kutaja*, etc. are to be grown, similar water basins with several channels should be planned, suitable to the location.

42. Sowing of seeds or planting of seedlings should be done on the borders of the trenches. This should be designed according to the regional custom befitting the season.

43. When a period of a month has elapsed, weeding of the multitudes of destructive grass, etc. from the roots of *vartaka* (eggplant, brinjal), etc. has been prescribed.

44–46a. The wise man should arrange the sprinkling of water from the trenches on the roots of *vartaka* (eggplant, brinjal), etc. every fifth or sixth day. Watering should be more frequent especially in summer. Weeding

of grass has been indicated as leading to great benefit by sages who knew the science well.

46b–48. It is seen that insects and other pests eat away the plant and leave the network of veins of vegetables like *vartaka* (eggplant, brinjal), *patolika* (cucumber), *valli, shavaka, kushmanda* (ash gourd), *kalata, surana* (elephant-foot yam), *shakuta, haridra* (turmeric), *ardraka* (ginger), etc.

49–50a. Therefore, farmers should scatter ashes mixed with earth or sprinkle water mixed with mortar in due order, in time as per local custom.

50b–52a. And whatever [other] work is specified by experts as regards sowing of seeds, abandoning of grass, etc., growing of creepers, etc., blossoming of flowers, etc.—all that should be observed personally, taking into consideration the traditional wisdom.

52b–54. In the cultivation of *patolika* (cucumber), *vartaka* (eggplant, brinjal), *kushmanda* (ash gourd), *jambira* (lemon), *likucha* (lakoocha), *ela* (cardamom), *draksha* (grape), *kharjura* (date palm), etc. too, discerning men should ascertain regional practices, and the appropriate agricultural operations for the season should be undertaken accordingly so as to ensure favorable results in the yield, leading to enjoyment of eating and tasting.

55–56a. Out of the above-stated, some are said to be tasty in the form of leaves, others in the form of flowers, still others in the form of fruit; some need to be plucked while some others in the form of roots [need to be dug out].

56b–57a. Some are fit to be enjoyed at the beginning, others in the middle or end of the blossom. Some are eaten while others are enjoyed in a liquid form.

57b–58. In the special case of *kadali* (plantain), the root, stem, flower, unripe and ripe fruits are plucked and everything is tasty and enjoyable. These are prescribed as fit for consumption by sages who have grasped the [dietary] principles.

59–60a. In case of vegetables like *patolika* (cucumber), *vartaka* (eggplant, brinjal), and *shavaka*, the unripe, young fruits are very tasty. Hence their plucking is recommended at that [unripe stage].

60b–61a. The plucking of *panasa* (jackfruit), *rasala* (mango), and sometimes even of the *kushmanda* (ash gourd), in the half-ripe stage yields tastier sap.

61b–62. The sap of *ikshu* (sugarcane), *narikela* (coconut), *likucha* (lakoocha), and *rasala* (mango), etc. is said to be suitable for extracting juice and other processes in their final stage.

63–66a. Thus considering the practice of one's own region and as per the order of one's own caste, according to whatever is described in the science of cooking in relation to season and ingredients, etc. and also looking at the good and bad points of bile and other humors in one's body, those who know the order in agriculture, should protect the cultivation of *patola* (pointed gourd), etc. in the house, field, pleasure-grove, own farms, meadows, on the bank of well or lake or below the water reservoirs or near their opening.

66b–67. Trees like *kadali* (plaintain), *puga* (areca-nut), *punnaga, narikela* (coconut), *amra* (mango), *panasa* (jackfruit), *ela* (cardamom), *draksha* (grape), *malati,* etc. and *vartaka* (eggplant, brinjal), *valli, kushmanda* (ash gourd), etc. should be especially grown with skill.

68. One should also protect and maintain various vegetables fit for eating, drinking, and chewing also, in due order of cultivation.

69–70. Farmers should grow vegetables everywhere on all possible pieces of land and in all seasons, viz., spring, summer, monsoon, autumn, and also possibly in winter and even in the chill period, on one's different fields, designing trenches as would suit the different times.

71–72a. Their leaves, rind, flower, or roots which are thick with juice, foster health and nourishment. So farmers should reap benefit from them as per the dictates of agriculture.

72b–73. *Ela* (cardamom), *lavanga* (clove), *ardraka* (ginger), etc., *puga* (areca-nut), *tambula* (betel), *ikshu* (sugarcane), *kadali* (plantain), and various other creepers should be grown too on the borders of the fields on portions of highland.

74–75. *Pippali* (long pepper) and various other plants, beneficial to people, as also medicinal and life-promoting creepers should also be grown in accordance with time and as is customary, under the advise of the seniors.

76–77a. Whatever has been considered [here] in sciences as fit to be attained by cultivation and conducive to the happiness of living beings should all be developed through skilled efforts by farmers in their own respective portions of land as per the advice of the sages.

77b–79a. For the protection of their respective families and for pleasing the gods even Brahmins should undertake agriculture. Agriculture is stated to be taken up by Kshatriyas, Vaisyas, Sudras, and all others. Thus the expert sages have expounded and laid down in sciences of agriculture.

79b–80. The Creator, God Brahma, produced various seeds on the earth at the beginning of this age, and [they] were specially sustained by the goddess Earth to fulfill the desire of propagation and creation.

81. "One seed will take multiple forms, and [thus] will undoubtedly become beneficial to men in a number of ways."

82. Thus said [Goddess] Earth, wife of [Lord] Vishnu. Sages listened to this science of agriculture as told earlier by [Goddess] Earth and brought the same down to the earth.

83. It was [then] preserved by kings, bearing the onerous responsibility of providing subjects with sustenance. Later, in due course it was studied especially by the Sudras.

84. Since then this science called agriculture was expanded variously by the residents of the earth in accordance with the rainy periods, and was also protected.

85. It was studied by men in different countries over a long time especially and devoutly.

86–87a. People also undertook agriculture in their countries on the farmlands and also attained full success in sustaining [huge] masses of living beings and especially their own people with the aid of gods and kings.

87b–89. Therefore, sages have stated in the past that everywhere in the country, rulers of the land have contributed their best aid in agricultural enterprises. Without the royal support, agriculture on this earth, be it on the national level or in cities and villages, cannot be a full success.

90. And this has also been experienced visibly by the subjects and the [actual] caretakers. Therefore, everywhere rulers should extend liberally their rewarding support to agriculture for the well-being of the districts and respective countries.

91. It also leads to their own progress and well-being, etc. and helps them achieve the highest glory. It earns for them divine favor, and also stability for dharma.

92–94a. Donations of land and cattle to proficient Brahmins belonging to various schools; digging of channels; subsidy in a number of forms for cultivation to Brahmins, traders, labor class, and others, who are weak in agricultural ventures would be helpful and should be followed in accordance with kingly duties.

94b–96a. Digging of wells—big and small; constructing lakes, pools, and [in general] reservoirs of water; fixing of water-raising contrivances and punishment to thieves causing damage to crops, etc. would be conducive to the success of innocent beings resulting in the establishment of the sacred law.

96b–97a. Thus assistance in many ways for agriculture is recommended. All that, which is expounded by sages, should be administered by the rulers.

97b–98. In some places like a village, a town, a region, or crowded places like cities and capitals, people are unable to take up farming. The king should protect these subjects.

99–100. For helping such weaker sections, the rulers should themselves start farming activity in those places under their governance, by establishing excellent fields of both the types [wet and dry] under the jurisdiction of different circles, appointing their own workers as also those from the subjects for farming purpose, in due course and as per the demand of the season.

101. Unemployed people from mixed castes and Sudras should be particularly employed for the farm-work at those respective places to cultivate different varieties of cereals, etc.

102–103a. In suitable places cultivation of *adhaka* (pigeonpea), etc., vegetables, floral plants especially *malli* (Arabian jasmine), *champaka* (champac), etc. should also be undertaken skillfully in plenty for the welfare and prosperity of the subjects.

103b–105. The ruler should furnish equipment to collect

the mass of vegetable products, the quantum of cereals, *adhaka* (pigeonpea), *chanaka* (chickpea), etc., *tila* (sesame), *masha* (black gram), *sarshapa* (mustard), as also heaps of *draksha* (grapes) and various other fruits, produced in seasons, and to store them to be made available conveniently to the people.

106–107a. It should be kept in the market place, or some other place designed for the purpose—say, at crossroads or courtyards or even open yards, in traders' shops or in some cases also in rooms under construction, as would be suitable to people.

107b–109. All the articles detailed out earlier, and other pleasurable articles like blankets, various garments, curd, milk, etc., eatables and snacks of various kinds, and whatever is available from cultivation like *gur* (sugarcane-jaggery), oil, and [in fact] whatever is specified here as wholesome, the king should make arrangements for their sale.

110. All that which is saleable, the ruler should bring to the shops and other places in the village, town, city, and capital.

111. He should engage especially rich traders skilled in marketing for the purpose of purchase and sale.

112–113. Whatever is available in spring and other months from cultivation, from machines, from weavers, or oil-men, gardeners—for instance fragrant substances—all that, the king should obtain.

114–115. With a view to achieve the happiness of the people [at large], he should arrange to place it in the village, town, city, and capital, in market places, and various apartments [halls] equipped with open spaces and appoint traders on the job.

116. He should also make arrangements of *prastha*, *kunja, drona,* and small *nadika* for [proper] measurement of grains of cereals and *adhaka* (pigeonpea), etc. and other commodities.

[Note: The first three are the measures of capacity: *prastha* = ¼ *adhaka; drona* = 4 *adhakas; kunja*—should have been *kunchi* = $^1/_{32}$ *adhaka,* where one *adhaka* = 256 fistfuls = 32 *kunchis,* i.e., 32 handfuls; *nadika* is a measure of length = 2 *hastas,* where one *hasta* is the distance between the elbow and the tip of the middle finger and is approximately equal to 18 inches.]

117. The king should arrange for the regularization and specification of *prastha* and other measures by using iron strips, planks of hard wood, [and] issue orders [for their use] in various places of the country.

118–119a. He should order employment of *pala* and *kara* prepared from iron pieces everywhere of the same value, of equal form, in the country.

[Note: *Pala* (a weight for gold) = 4 *karshas* = 64 *mashas* = 640 grains of *masha* (black gram). *Kara* = measure of breadth of 24 thumbs (?).]

119b–120a. He should announce their value among the traders and villagers through his employees, especially the Brahmins.

120b–121a. The king should cause everywhere use of the balance, made of bell metal or brass for weighing vegetables and other [articles].

121b–122a. The king should employ everywhere in his country *pala, prastha,* and other measures after marking them distinctively through ministers and other [officers].

122b–123a. The king should publicize the [technical] knowledge of cultivation of cereals, etc. and also the marketing information, in all places and in all countries.

123b–125. The king should execute skillfully whatever assistance has been indicated by sages in sciences with regard to cultivation of crops yielding oil [edible], clothing, vegetables, etc. for the happiness of the subjects and accomplishment of welfare in every village and in every family.

126. There will be no happiness and [prosperity] on this earth without agriculture for the bipeds and the quadrupeds—this has been finally declared by experts in sciences.

127. Therefore for the sake of pleasing gods and for the protection of subjects, it is decidedly the king's responsibility to see that agricultural work is not held up.

128. Religious guides, Brahmins, and especially the secretaries have to motivate the king, who [really] carries the burden of the protection of subjects.

129. And of all matters [of the state], agricultural activity is commended as the best, which the king should carry out in his own respective country assiduously, expediently, and in due order.

130–132a. Thus wise kings should establish in villages and towns, and especially in the capitals, with [suitable] designs, pleasure-groves, planted forests, and orchards on the outskirts or centers of cities, particularly for the pastime of ladies in the [royal] inner apartments, and should also plan resthouses and groves on the borders of forests.

132b–133a. The king should provide assistance to the subjects for the building of houses even by growing trees like *sara* (sal), *chandana* (white sandal wood), etc.

133b–134a. The king should arrange to grow in the portions reserved for gardens in palace-yard various beautiful trees bearing plenty of fruits.

134b–137a. *Rambha* (plantain), *mocha* (banana), *jambira* (lemon), *matulunga* (citron), *pippali* (long pepper), medicinal creepers, *nalada* (cinnamon), *kusha, kasha* (thatch grass), *tulasi* (sacred basil), *bilva* (bael), plants of various fragrant flowers offered in worship as are available in the respective seasons and also other plants conducive to the health of the family should be planted in the palace gardens.

137b–138. The king should also plan a temple garden on a holy piece of land for the celebrations of festivals either in the interior of the village or on its outskirts or as per the availability of place in keeping with the practice of the region.

139. Thus should be planned a ladies' garden excelling in beauty due to the growth of several attractive trees on the palace lands.

140. On other [suitable] locations in the suburbs of the capital the king should order to set up similar gardens for the enjoyment of people.

141. Similarly, large forests teeming with various trees, on the forestlands or on the outskirts or interiors of existing forests or on the mountain slopes should be propagated.

142–143a. He should give instructions for the preservation of seeds of many kinds of trees. The king should ensure on that basis the assistance to the citizens for building houses with planks and pieces of wood and with the availability of flowers and fruits.

143b–151. The king, bearing the responsibility of sustaining the earth should therefore, order to plant on the extensive lands adjacent to the surrounding wall all over the country, such selected trees as *karanja* (pongam), *naktamala, eranda* (castor), *bhurjaka, arjuna* (arjun), *sarjaka, nipa* (yellow teak), *kadamba* (kadam), *shigru* (drumstick tree), *shami, maruvaka* (emetic nut), *devadaru* (deodar), *shriparna, tinduka, vata* (banyan), *plaksha, bhadradaru* (long-leaved pine), *priyangu, vibhitaka* (belleric myrobalan), *amalaki* (Indian gooseberry), *haimavati* (yellow myrobalan), *karnikara, likucha* (lakoocha), *nimba* (neem), *ashoka* (asoka), *shirisha* (lebbeck tree), *dadima* (pomegranate), *jambu* (Java plum), *kapittha* (wood-apple), *sarvatobhadra, champeyaka, kurabaka, varnaja, karnika* (Indian white rose), *tapiccha, tamala, sindhuvara, tintrini* (tamarind), *vamsha* (thorny bamboo), *chuta* (mango), *rasala* (mango), *amra* (mango), *badari* (jujube), *rathadruma, madhuka* (mahua), *pilu, punnaga, paribhadra,* and *kovidara.*

152. The king should order these various trees of different species to be planted and should arrange for their protection through watering.

153. These large forests need to be protected from fire, harmful animals, and thieves.

154–155. They can be situated on the riverbanks, located in different countries like Gandhara, Kunti, Panchala, Kasmira, Avanti, Sindhu, Nepala, Nisadha, Kosala, Anga, Gurjara, Saurastra, and many other countries on fertile lands.

156–157. They should be instituted on select spots of land, brightening all quarters with lines of all [kinds of] trees in different countries, [and] should be duly maintained for the sake of happiness, on all fronts with the help of farmers, citizens, soldiers, fighters, and army-men with the provisions of lakes, channels, wells, etc.

158–159a. The king should locate by examining the underground indicators, mines producing a number of metals in mountainous regions or in the heart of forests.

159b–160a. Pieces of iron, brass, as also gold, silver, and red ocher should be procured from the mines with effort for well-being.

160b–161. Instruments [and other articles] of various

kinds should be designed with the help of blacksmiths skilled in ironwork, carpenters, and goldsmiths in villages and towns.

162–163. These implements useful for agriculture should be given to villagers. The king should place a network of manifold weapons in [the hands of] soldiers and in army settlements for the protection of cities, mansions, forts, etc.

164–165. The king should arrange to make ornaments of several designs of gold, silver, [and other] metals as also from coral and pearls produced by sea-waves; [he] should offer them first to gods, and then to Brahmins.

166–167a. He should also wear them himself and adorn the queen and other ladies in the palaces with suitable ornaments to their hearts content, and thus filled with great pleasure should protect this earth.

167b–168a. The king thus should acquire all these manifold articles from all sources in those countries as would bring in all [kinds of] happiness.

168b–169. As time changes the king should take into account a change in the manner and mode of agricultural technique for sowing of seeds, and also consider the application of agricultural [science] as different for cool and warm climates.

170–171a. Cattle, rainfall, water reservoirs and many other factors also cause this change. Accordingly, the king should manage the farming activities, depending primarily on the quality of the soil.

171b–172. If the king is pleased, everything succeeds in the world; if [however] the king is displeased, everything is sure to be ruined. Therefore, the king should always be pleased so as to bring prosperity to the country.

173–174a. The king should collect from farmers by way of tax, stipulated amounts [as per agreements], and grain or other articles as the case may be, and protect in all ways the earth with its living beings and immobile property, in a just manner like his own family.

174b,c–175. Brahmins, Kshatriyas, Vaisyas, Sudras and all the others should humbly accept aid for agricultural work from the king and in return accomplish success in agriculture as per season and custom and pay the taxes in cash or kind to the king for the welfare of the country.

176–177a. They should thus perform their duty to gods, guests, and their own families and should, according to the best of their ability, follow the path of righteousness as prescribed [by sages].

177b–178. People in villages, countryside, and especially cities getting kingly aid should foster mutual good feeling, be able to discharge duties of their class and stage [of life] and shine forth on this earth for all time glorifying all the quarters with their success.

End of Section II on vegetable cultivation.

## Section III: Orderly exposition of edibles and non-edibles

Kashyapa [further] advises:

1–2a. People of all classes—Brahmins, Kshatriyas, Vaisyas, and Sudras as also others— acting on the orders of the ruler should cultivate diverse crops in a manner thus indicated especially in the fertile fields.

2b–3a. They will then bring plenty of different varieties of [rice] and other grains, as also *adhaka* (pigeonpea), *marichi* (black pepper), *sarshapa* (mustard), etc. to their houses.

3b–4. All that should be dried in the sun and kept ready for the purpose of cooking as per the season and proper order, daily to please gods. Righteous ladies should execute the cooking part as ordained by god.

5. If honoring gods and guests is successfully performed, protection of the subjects will follow as a matter of course. Thus the great sages have stated.

6. Therefore the Brahmin conversant with sacred rules should employ righteous ladies for cooking [only] after knowing the regulation with regard to edible and non-edible [articles] [made from] diverse substances.

7. Food prepared from *pilu* and *kodrava* (kodo millet) is not fit to be offered to gods and Brahmins. Also to be avoided are *shubha* and white varieties of *vartaka* (eggplant, brinjal), *lashuna* (garlic), and a variety of *granjan* (shallot).

8. *Palandu* (onion), *kavaka* (mushroom) and any exudation as also articles produced at a dirty place are prohibited.

9. Brahmins should also avoid large *kushmanda* (ash gourd), *panna, shigru* (drumstick tree), and *piluka* as also products from improper places.

10. Similarly they should sedulously avoid even main items of food if defiled by ants, flies, worms, etc. in the house.

11. Food defiled by dogs, cocks, etc., food offered by the untrustworthy, and items spoiled by nails, etc. should also be rejected.

12–13. Food contaminated by fibers of husk or chaff, spoiled by cats, smelled by muskrats and mice, and [in fact] whatever food is defiled should be avoided carefully, especially by Brahmins.

14. Food that is spoiled, smelled, or [even] touched by vile [people] should not be eaten by those who desire felicity in the world from all points.

15. One should avoid whatever is offered in an impure place, or the remains of mouthfuls, or that which slips down from the mouth.

16. That food is also said by the sages to be unfit for eating and not conducive to glory, or achievement of welfare, whatever is not offered to guests, and especially to gods first.

17–18. Food given at the wrong time in the house, etc., food cooked in the wrong place, eatables not washed with water, maybe vegetables or [other] snacks, are said to be forbidden [food] especially for Brahmins.

19–20a. Food cooked by low-born people, that which is defiled by excrement, urine, etc. or contaminated by hair, etc., that which is eaten first by the cook himself, and meals, etc. cooked by one who has not bathed should be avoided.

20b–21. What is served by hand, given with the sacred thread hanging down towards the left part and over the right shoulder, given with an iron vessel or from box made out of wooden pieces, and similarly food which is stale should be avoided by a good Brahmin.

22. Food which is cooked in another house and brought to one's house later, has been advised as forbidden by sages proficient in *Shastra.*

23. One should not eat food mixed with curd and food mixed with *tila* (sesame) in the night. Taking meals in moonlight without a lamp is also to be avoided.

24. Similarly, taking meals on the floor or in darkness is worthy of censure [as] mentioned by great sages and even gods.

25–26a. Similarly, water with foam, the first accessible water in a river, etc., water fallen from the sky, water from some current, and water contacted by an untouchable should be diligently avoided by the wise.

26b–28. Camel's milk, milk of whole-hoofed or cloven-hoofed animal, milk mixed with salt, milk of a young woman, milk of a cow who has no calf or exuded after a calf, impure milk of a she-goat, and milk placed in a copper [vessel] is known to be avoided and is censurable.

29. Therefore, a learned Brahmin knowing the sacred rules about edibles and non-edibles should cook as per rules as it will help him in mastering the Vedic texts.

30–31a. The sages seeing the essential nature of things have not prescribed this rule for Kshatriyas, Vaisyas, and Sudras in the world. They have decided that even flesh-eating is not wrong for them.

31b–32a. [In fact] Brahmins, Kshatriyas, Vaisyas, Sudras and all others on this earth should know the regulations about worthy and unworthy meals and the approved rules of conduct of the respective region in this regard.

32b–33a. If they eat food after offering it to god first, they will shake off their sins and live a life brightened with qualities of faith and devotion.

33b–36. Therefore, in all countries the Brahmins, Kshatriyas, and Vaisyas should bring into their respective houses pure articles like *tandula* (rice), vegetables, water, milk, curd, ghee (clarified butter), butter, oil, all clean and fresh. After that either they themselves or their wives should clean the utensils, smear the cooking floor with cow-dung and cleanse the fireplace with fuel.

37. They should then worship the Earth, Lord Indra, Yama, Agni, Varuna, and Brahma.

38. Having completed the cooking in time, the various articles of food gleaming with the six flavors, etc. are to be placed on a purified place.

39–40. Various eatables and food with several complementary dishes and with side dishes like *vataka,* etc. should be cooked with sugar, jaggery, etc. with various processes like seasoning, soaking, squeezing, etc. according to the instructions of the science of cookery, in oil, ghee (clarified butter), etc.

41–42. Food thus prepared duly with devotion and affection in time should be placed in a temple or in the house, filling it properly in boxes and other utensils for offering it to gods—this has been directed in the codes [of rules].

End of Section III on edibles and non-edibles.

## Section IV. Orderly exposition of information on multiform (sacrificial) offerings

Kashyapa [further] advises:

1–2a. The cooking activity is twofold: regular and occasional. Regular is that which is regularly fit for a glance of gods, etc. Occasional is similar to it, with a change in dishes.

2b–4a. *Havya* is the name of all that food which is fit [to be offered] to gods; this same has been ordained by rules as fit for guests and [other] citizens, and named *bhojya,* while *kavya* is [that which is] offered to the manes and is to be eaten along with one's own relatives only.

4b–5a. The image of god to be worshipped is stated to be of various forms. It may be a *Shivalinga* or a *Salagrama* of stone.

5b–6. After knowing about the various incarnations of Vishnu, the creator, learned Brahmins, Kshatriyas, and Vaisyas should, after performing *sandhya,* worship god according to the dictates of *Shastra* to the best of their ability.

7. Everything offered in worship to god is like formalities observed for the kings. First, sipping a handful of water, bathing, offering clothes, etc. are the rituals to be performed.

8–9. Placing the [offerings of] food in the [proper] place with trust and devotion, one should then offer in order to gratify the deities, the best meal of diverse [articles] enriched with different complementary dishes and *gudanna, payasanna,* etc. cooked by righteous ladies.

10–11. Curd-rice, rice mixed with *mudga* (mung bean), *apupa, vataka, godhuma* (wheat)-cake, *polika, majaka, modaka, sarkarabandi,* with *draksha* (grapes), *ela* (cardamom), *kumkuma* (saffron), and crystal sugar should be offered to god.

12. *Payogalakabandi, vichitranna,* and sweets coming in due order as are suitable to the season should be offered too.

13–14. *Dala* made tasteful with salt, etc. and prepared from a mixture of rice and *masha* (black gram), as also *mahadala* with ghee (clarified butter), the same with curd or with sugar and ghee can be offered. Cooked like sugar-syrup, *dala* indeed is prepared in various forms.

15. Enriched with sugar, *jalepika,* prepared with *mudga* (mung bean) or with *godhuma* (wheat), or with *masha* (black gram) can be served with ghee (clarified butter).

16. Substances are of six tastes, viz., sweet, salty, bitter, pungent, sour, and rarely astringent.

17–18. Dishes like *dala,* etc. prepared from the flour of *godhuma* (wheat), *masha* (black gram), *mudga* (mung bean), and *chanaka* (chickpea) are of different types. Some are eaten, others drunk, and yet others chewed. Prepared skillfully in oil or ghee (clarified butter) it tastes excellent to the palate.

19–20. Rice, etc. or *temana,* etc. and mainly *atirasa* and various other food cooked with trust and devotion and compounded with pure objects prepared in the kitchen as per the rules are important for relishing. All this food is fit to be offered.

21. All this various food should be offered to Lord Vishnu of immense luster, seated for meals in the course of worship rituals, in a devout manner, by a learned Brahmin.

22. The offering comes at the completion of the worship with [offering of] flowers, besmearing of scents, fanning with *chowries* and fans, and singing of praises.

23. All the [procedure of] worship of gods has been stated to be like formalities to a king. One should offer them to the Lord both in the daily and occasional worship diligently.

24. Thus one should please the Lord of the Universe who grants the desires of his devotees, everyday, punctually, with devout prayers, salutations, and the like.

25. The food cooked from holy substances obtained from cultivation should be daily and reverentially offered to Vasudeva, Lord Krishna, Vishnu, the Supreme Self, and then to the guests, and in [this] order to the [members of] one's family.

26. One should offer food and snacks and all the varieties with six flavors cooked in the kitchen with a view to protect oneself.

27–28a. The good twice-born [higher caste] should feed delightfully on leaves especially of *kadali* (plantain), and give them *tambula* (betel leaves) with pounded camphor, etc. in due course.

28b–29. In this way, the twice-born, the best among the knowers of sacred lore among the subjects, in compliance with the king's orders should regularly and devoutly perform both *devayajna* and *bhutayajna,* and lead in this world religious, glorified, and devout life.

30. He should do this in accordance with the [sacred] dicta for the welfare of one's own self, of the king, and especially of the country.

Sage Kashyapa has stated [all this] in the interest of public good.

End of Section IV describing various offerings.

**End of Kashyapiyakrishisukti.**

**May the cows and the repositories of sacred knowledge ever flourish.**

**May happiness prevail in the entire world.**

# Commentaries

# Commentary

**Nalini Sadhale**[1]

The title, Kashyapiyakrishisukti, of the work is simple and clear stating the name of the author and the subject it deals with. This is the text on ancient Indian agricultural science by sage Kashyapa.

## The author

Kashyapa is one of those legendary names in ancient Sanskrit literature which denotes a group of individuals and families rather than an individual. According to the Sanskriti Kosha (Part IX, p. 120) it represents a group of hundred Brahmins. Kashyapa is a *gotranama* of several Indian families even today. The name quite frequently appears in Sanskrit literature. It is found in the Vedas, Brahmanas, Aranyakas, Upanishads, Epics, Puranas, Smritis, Sutras, and in classical Sanskrit literature, too. The foster-father of Shakuntala in Kalidasa's drama was also a Kashyapa.

According to Wojtilla (1985)[2], the present author and the treatise Kashyapiyakrishisukti belong to the Vaikhanasa school. (Incidentally, Kalidasa's Kashyapa stated above was also a Vaikhanasa.) Initially this school represented the hermit class belonging to the third Ashrama —a stage of life recommended for the Hindus during which the householders left their homes and the worldly pleasures to reside in forests and led a course of life full of austerities and devoted to religious and academic pursuits. Vikhanasa appears to be the name of the founder of the school. Vaikhanasas were his followers. The ancestors of these academicians framed the principles and rules to be observed by hermits of the Vanaprastha stage of life. The authorship of a large part of the Aranyaka literature of the Vedas is attributed to these scholars.

With the rise of Buddhism and Jainism the institution of recluses gained power and prestige as Bhikkhus and Arhats respectively while the Hindu hermits distinguished themselves from others by turning more and more to the religious rituals of the Vaishnavas. Wojtilla (1985) attributes the present work to the Vaikhanasas belonging to the Vaishnava cult of southern India. The work under discussion does show the author's inclination towards the Vaishnava cult.

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2. Source: Wojtilla, G. (Tr.) 1985. Kasyapiyakrsisukti: A Sanskrit work on agriculture II. Acta Orientalia Academiae Scientiarum Hung. Tomus 39:85–136.

## Other works of the author

Besides the present treatise on agriculture other works like Vaikhanasadharmasutra, Kashyapadharmasutra, some of the Smritis (the ancient Hindu law books), and Kashyapajnanakanda are also attributed to the Vaikhanasa school. Except the last-mentioned work, the other books are relevant to the socio-religious code of conduct of the Hindus. Kashyapa is credited here with at least two more works besides the present treatise on agriculture as is clear from their titles. Tradition also ascribes some Ayurvedic works like Kaumarabhritya to Kashyapa.

As to whether these are the works of the same individual or not cannot be decided beyond doubt, as besides tradition, no other conclusive evidence is available to prove the authorship. For the same reason the questions regarding the identity and the date of the author also remain without final answers. In all such cases it is only the internal evidence provided by the contents of the texts that may have some clue to the aforesaid questions. However, even in this regard we face the difficulty of the text having several revisions and also interpolations made at later dates. Therefore, statements regarding the historicity, etc. about this work have to be made only with certain reservations.

## Smritis and agriculture

Common authorship for Smriti work and an agricultural treatise is not unusual in Sanskrit tradition. The name that comes to the mind in this context is that of Parashara to whom is also attributed works both on Smriti and agriculture. This may be due to the fact that most of the Smritis discussed and framed laws governing agriculture, the largest revenue-earning profession of ancient India. Property, inheritance, land-disputes, and agricultural taxes are some of the common topics falling within the sphere of most of the Smritis too. There should be no difficulty therefore, in regarding Kashyapiyakrishisukti and Kashyapadharmasutra as works of the same author. Kashyapa's present treatise on agriculture, Kashyapiyakrishisukti (indicated hereafter as KKS) is directly and firmly based on principles common to the Smritis and other works on Dharmashastra.

## Social and religious background

Thus for instance, it is very clear from the text of KKS that the society which Kashyapa had in mind while discussing various issues related to agriculture, is the one based on its fourfold division of Brahmins, Kshatriyas, Vaisyas, and Sudras with the king of the land as the ultimate and absolute authority. The life span of an individual was divided into four stages. Thus, like the Smritis and other Dharmashastras, Varnashramadharma is the foundation of the society. The contents of KKS relate to Varnashramadharma.

Most significant, however, is the author's rational and liberal view in this regard. While the Smritis entrust the occupation of agriculture entirely to the Vaisyas and the Sudras, Kashyapa repeatedly states in his work that agriculture is everybody's business and that all the four Varnas must contribute to it. The peace and happiness of society depend primarily on its agricultural prosperity.

Hence, the king who bears the ultimate responsibility of the well-being of his subjects should, with the help from all the four classes, initiate, sponsor, and control the entire agricultural activity at every stage. This appears to be Kashyapa's basic approach to agriculture in this text and he is never tired of highlighting it through its pages.

Like the Smriti works Kashyapa also gives religious justification to the agricultural profession. However, it is chiefly to emphasize its importance. At the very outset of KKS he refers to the religion of sacrifices and states that the gods are propitiated only if the grains used in the rituals are 'holy' (healthy ?) and for producing such grains everyone must work hard. Thus it becomes a solemn duty of everyone to contribute to the activity of farming according to the author. He even goes a step further stating that it is the most meritorious, sacred, and vital function of the earth too, to produce food grains. He compares them with the black beads of the sacred *mangalsutra* tied round the neck of a Hindu woman at the time of marriage by her husband to confer on her the marital status. In case of the earth, Lord Vishnu is her husband and producing food grains for sustaining the Lord's creation is her duty of primary importance. Incidentally this is an instance of the author's Vaishnava inclination, too.

Of course everybody cannot be directly involved in farming. The author clarifies his statement by suggesting the various ways of helping the farmer. The learned Brahmins, for instance, can help in settling land disputes, etc. through their profound knowledge of the Smritis and their unbiased and truthful nature. The Kshatriyas can lend help by protecting the farmlands from encroachments, assaults by enemies, wild animals, and thefts, etc. by using their martial training and skill. Vaisyas can help by ensuring the use of standardized weights and measures and by transporting and marketing the agricultural commodities without antagonizing the farmers' interest. Sudras can contribute the labor required throughout the year on the farmlands.

Besides, any member of the society could contribute to this profession through charity. Lands, cows, and other animals useful for farming as well as farming tools and implements could be donated. Digging canals and wells to provide water supply to the farmlands, free feeding of laborers, cattle, etc. were the ways of helping farmers (Section I, verses 201–202). The author believed that the division of society into the above-stated four classes was ideal for its overall progress but he also knew that it was only an ideal and that there was always a large number of individuals who for various reasons, fell outside this frame. He has taken notice of these people and has appealed to them too, to help agriculture and fulfill their duty to society (verses 189–191). The author has stressed the importance of agriculture by his all-inclusive attitude and has also shown that this profession is by its very nature, of a complex character and can flourish only through collective, persistent, and wholehearted efforts of all beneficiaries.

## Summary

The author divides the subject matter of KKS into four main sections:

Section I: Orderly exposition of grain-agriculture

Section II: Orderly exposition of vegetable husbandry

Section III: Orderly exposition of edibles and non-edibles

Section IV: Orderly exposition of information on multiform (sacrificial) offerings

## Section I

The first section consisting of nearly six hundred verses covering about three quarters of the entire treatise is further subdivided into fourteen different sub-sections:

1. Introduction (verses 1–24) (24 verses)
2. Division of land (verses 25–60) (36 verses)
3. Construction of water reservoirs (verses 61–110) (50 verses)
4. Construction of canals, wells, etc. (verses 111–181) (71 verses)
5. Characteristics of good farmers and village officers (verses 182–248) (67 verses)
6. Procurement of tools, implements, and other resources (verses 249–271) (23 verses)
7. Plow worship (verses 272–278) (7 verses)
8. Worship of bullocks (verses 279–286) (8 verses)
9. Characteristics of good cows and bullocks (verses 287–320) (34 verses)
10. Season of farming and determining land for rice and pulses (verses 321–343) (23 verses)
11. Procurement of seeds (verses 344–411) (68 verses)
12. Plowing for sowing seeds (verses 412–427) (16 verses)
13. Cultivating procedure for grain crops (verses 428–525) (98 verses)
14. Cultivation of pulses and other crops (verses 526–606) (81 verses)

The topics listed above and the number of verses allocated to them suggests the manner in which Kashyapa deals with the subject. After the introduction, Kashyapa straight away takes up the topic of selecting a proper piece of farmland. Natural vegetation is one of the important factors to be considered (verses 32–33). Land selection is based on scientific examination of the soil (verses 51–53). It is stated to be the king's duty to get the entire land examined by experts and identify land that is good for agriculture, is suitable for horticulture, should be reserved for forests, and should be selected for the purpose of constructing permanent water reservoirs. The location could be villages, other parts of the country like towns or cities, mountains or the premises of forts and palaces. So long as good soil and supply of water were assured any location was considered good.

Sub-sections 3 and 4 deal with the irrigation schemes and facilities. This is a very significant portion of KKS. Another ancient Sanskrit text, Krishi-Parashara, also devoted to agriculture, contains no information on this

subject. As a matter of fact, agriculture in ancient India chiefly depended on rainfall as is quite evident from the several theories of rainfall prediction expounded by Parashara in his work. This topic is conspicuously absent in KKS. Kashyapa laid emphasis instead, on the irrigation schemes and other alternative means of water supply. This may be considered, for that matter, an important feature of KKS complementary to Parashara's work.

Sub-section 3 is fully devoted to the instructions regarding the water reservoirs. These were to be constructed to benefit both the villagers and the farmers. In the description of water reservoirs Kashyapa has hinted that there should be a common source of water for everyone (irrespective of caste) and that it should serve the needs of animals, birds, and reptiles too (verses 86–88). "Such was the wish of the creator!" asserts Kashyapa. This is another instance of the author's liberal outlook.

He also advises planting certain trees on the banks of the water reservoirs and of the other sources of water (verse 93). "*Veta, vata, plaksha, khadira, tinduka, tintrini, bhurjara, venu, nimba, kadamba* as also *panasa, amra, rasala, punnaga, malati, kunda,* and *champaka* are the trees for the plantation of which special effort should be made", advises the sage. Trees should be planted, according to Kashyapa, at various other locations too. Trees are said to be the destroyers of the disease-causing agents (verse 104). Trees are also stated to be indicators of groundwater (verse 153). Kashyapa has described four types of canals (verse 113) and has provided the details of their planning and construction (114–141).

Construction of wells is similarly described in great detail (verses 146–168). The device for lifting water is also described. Bullocks, elephants, or human beings are stated to be employed for the purpose of pulling '*ghatiyantra*' for watering the crops (verses 169–170).

Land and water being the primary needs of farming, the author has discussed them first. The third important factor is the agriculturist himself.

Sub-sections 5 and 6 deal with details of what is expected of a prospective farmer and what is the preliminary equipment he has to possess for taking up the farming profession. He has to be first, a good human being according to the author. Verses 182–193 describe in detail the characteristics of a good farmer. While appointing agricultural officers at various levels the king is advised to take these characteristics into consideration. "While the inborn qualities of the four classes are to be kept in mind, merit alone should be the final criterion", advises Kashyapa (verses 207–213). "Anyone (irrespective of the caste) can be appointed at any post" is the golden advice of KKS (verse 218).

Ancient Indian Sanskrit writers could not ignore certain religious and social conventions even in their works devoted to scientific subjects and Kashyapa is no exception to this. Sub-sections 7 and 8 describing the ceremonies to be performed before starting the actual farming activity clearly show this. It must be noted, however, that these are the smallest sub-sections covering altogether, only fifteen verses (about 2% of the entire

matter discussed in Section I). Granted that references to religious customs and traditions keep recurring occasionally in the other sub-sections too, there are several instances where the author's judgment is based on rational thinking rather than on religious and such other considerations.

Sub-section 9 is focused on cattle, on which depended the success of agriculture to a very large extent. The external appearance and the internal qualities of good bullocks are described in detail to guide the farmer in choosing his cattle.

Sub-section 10 refers by name several regions of India to instruct the farmer in the respective area about the right season for farming. Agricultural land is divided here into two categories: *shalibhu* (= land fit for rice cultivation) and *adhakadibhu* (= land suitable for cultivation of pulses and other grains) (verses 330–332).

Sub-section 11 contains information on the seeds to be collected by the farmer. It enlists several varieties of rice and other grain species. A good quality seed is stated to be the first step towards the success in farming (verses 360, 361, and 375). Seeds of several trees specified for plantation are also to be procured and preserved. Seeds of wheat, pulses, fruits, vegetables, and condiments such as turmeric, cumin, black pepper, etc. also need to be preserved for cultivation in the proper season. Kashyapa has advised four types of cultivation in this context (verses 354–355). Kashyapa describes the procedure of preserving the seeds and advises farmers to dry the seeds in the sun, store them in different kinds of vessels, and protect them from stormy rains and moisture as well as from rats, cats, and rabbits (verses 374, 403–407).

Sub-section 12 briefly describes the procedure of sowing in a general manner. It involves plowing, leveling, furrowing, or digging pits (verses 418 and 419). The procedure is said to depend on the characteristics of land, availability of water, sunshine, and also on traditional wisdom.

Sub-section 13 is devoted to the procedure of rice cultivation. Kashyapa has described this in great detail. There is a common farming procedure for the several varieties of rice which he has mentioned. The difference is only in the period required for their ripening which varies from three to six or more months (verses 461–464). The basic procedure starts with plowing followed duly by filling of water, planting of seedlings, weeding, water management, crop protection, harvesting at the proper time, pounding on the threshing floor, cleaning, and storing in the house. Kashyapa has recommended cooperative farming too (verses 440–443). He also advises the farmers to take up second cultivation every year (verses 516–518). This is said to be particularly beneficial on a fertile land with sufficient water supply throughout the year. Observation, regional tradition, and mutual cooperation play a vital role in the farming activity according to the author. Final success is stated to depend on vigilance at every stage. "Cattle, farm employees, canals and water reservoirs, tools, seeds, standing crops, storage—all must be vigilantly protected to make farming a fruitful activity", says Kashyapa.

Sub-section 14 similarly describes in detail the cultivation of pulses, wheat, sesame, *yavara* (sorghum ?), kodo millet, *kira,* condiments, sugarcane, plantain, etc. The difference lies in the requirement of water. "*Adhaka,* etc. can be grown even on tablelands and less fertile lands with less water" says Kashyapa. In the same section plantation of cotton and castor trees is also described.

**Section II**

Section II deals with the cultivation of vegetables and comprises 178 verses. Rice, pulses, and vegetables prepared with different condiments together make a complete meal for good nourishment according to the author. He has therefore discussed their cultivation in that order of preference up to the end of Section II. In this context *krishi* (agriculture) is of four types according to Kashyapa: rice and other food grains; pulses; vegetables; and flowers and fruits, etc. In yet another context, in this section he states, "By growing rice on fertile lands and pulses on the less fertile lands people should cook food for themselves. However, nowhere on earth food is complete without tasty and nourishing vegetables" (verses 2–4). Later in the same context he continues, "People should plan their food by taking into account season, region, tradition, and custom. They should bear in mind, however, the fact that rice, pulses (from which soups are prepared), vegetables and milk and milk-products like curd, ghee, etc. must be included in their diet in the same above stated order of preference." In the case of vegetables, Kashyapa advises people to follow the traditions of their regions and castes. They should fetch only such vegetables as are customarily eaten there and should cook them as per the recipes stated in the *Pakashastra* (the science of cookery) (verses 63–65). At another place the author mentions the names of Nala and Bhima as expert cooks. How the author is connecting the subject of nutrition with agriculture is evident here.

This section also contains information and instructions on topics of heterogeneous matters such as public sector farming (verses 97–103), marketing of agricultural and various other commodities (verses 103–115), standardization of weights and measures (verses 116–122), laying of gardens (verses 130–140), propagation and protection of forests (verses 141–157), mines and their management (its connection with agriculture being iron tools of farming) making ornaments of gold, pearls, corals, etc. (verses 158–165), and collection of taxes from farmers and others (verse 173). Many of these are briefly and superficially treated. Kautilya's Artha-sastra enlightens us on many of these subjects in a more systematic manner.

**Sections III and IV**

These two sections together consist of barely 72 verses which is about 8% of the whole treatise. The matter discussed hereunder is related directly to some socio-religious topics and their connection with agriculture is remote. These sections are like appendices; however, these serve a different purpose. Hence they may be considered relevant to the discussion about the contents of KKS. In a curious way Kashyapa has interlinked the topics of nutritional food and balanced diet for human

beings with agriculture in his treatise as has been hinted above. Ayurveda, the ancient Indian medical science, has treated these topics in great detail. However, incorporating them in a treatise on agricultural science is a significant feature of Kashyapa's work.

Thus Kashyapa begins with the basic question, "Why agriculture?" and answers the same saying, "Because it sustains life on earth." He repeats the same in different ways in different contexts (Section I, verses 12–16, 65–69, 240–248, 349–353, 525, 529–531, etc.). Thus the point that the purpose of agriculture is to provide food and nourishment to people and other creatures on earth is emphasized throughout the text.

It appears from all these instances that the author intends to bring the activity of agriculture, which he describes primarily through the pages of KKS, to its logical conclusion. Food grains and vegetables cannot sustain the life of people unless they are properly cooked and eaten in pious, decent, and hygienic conditions. Sections III and IV, which apparently look irrelevant to the contents of KKS, serve this purpose of providing instructions on how and through what procedure and manner the agricultural produce should be brought from the farm to the plate. The food so prepared has to be first offered as oblation in sacrifice and then to Lord Vishnu before it is consumed by the farmer's family and others. The farming activity is to be undertaken for preparing holy food to please gods (Section I, verses 8–9). It is therefore brought to its logical conclusion by offering the food to god before being consumed by the farmer and his family (Section IV, verses 29–30).

## The text

The text on which the present translation is based is a copy of the transcript No. 38J8 in Devanagari script procured from Adyar Library, Chennai, India. It is copied by a pandit and compared by two other scholars. It is therefore to be presumed that whatever faults or imperfections are found in the present text are to be traced to the original manuscript. It is not clear from the transcript as to what was the script in which the manuscript was written. It may be conjectured that the original could have been in any one of the South Indian scripts. The Sanskrit word *'gumphita'* is invariably spelled in the text as *'gumbhita'* which is the way it is generally pronounced and written in the southern languages. The transcript is very neatly and legibly written in a good hand. Flaws like *graha* for *griha, siddhayai* for *siddhaye, bhoovah* for *bhuvah, bhuvau* for *bhuvi,* or *suchi* for *soochi* are negligible. Occasionally faults like *parighaktu* for *parighayukta* or *yadvara* for *yavara* have also crept in. But they do not pose any obstruction to the comprehension of the contents.

## The form, language, and style

Kashyapa has composed this work in a metrical form and has uniformly maintained it till the end. *Anustubh* is the only meter used throughout the composition. Sometimes it is felt, however, that more elaborate meter could have been used to avoid *kulakas* (clustering of several verses). One verse for one thought is an ideal arrangement but in KKS a sentence or a thought-unit often spreads over two to six verses. Sometimes verses

also have to be split as the first line is linked with the previous sentence and the second with the following. Sometimes a line can be interpreted in either context giving rise to ambiguity. Writers like Parashara and Surapala have mostly overcome this problem by occasionally using longer meters containing more matter.

The language of KKS is very simple and easy, reminding one of the language of Puranas. It has a natural flow. In a work consisting of over 800 verses there are less than eight to ten places where the intention of the writer is not clear. Verses 518, 574, and 575 may be cited as rare examples. Normally, clarity, ease, fluency, and simplicity are the characteristics of Kashyapa's language.

The style is also equally simple. Ornateness, tightly packed compounds, involved constructions, difficult words or grammatical forms, and idiomatic expressions are almost absent from the text. In the entire bulk of more than 800 verses, I came across only two or three places where the author has used a simple figure of speech like simile; first, when he describes the lush green line of newly sprouted rice plants in the farm by comparing it with a parrot's feathers and its freshness by comparing it with a girl entering youth (Section I, verses 447–448); and second, when he compares the rice grains threshed out from the ears with a pearl necklace (Section I, verses 490–491). The rest of the text is very plain and even dry like a piece of arid land.

Of course in a work on a science subject this is no flaw. However, conciseness and precision of expression which are the merits of a writer on the subject of science are also missing here. Examples of prolixity and verbosity are in plenty. Instances of repetitions and digressions are frequent.

Being a work on an applied science such as agriculture, KKS has on the whole succeeded in instructing the agriculturist systematically on various issues of farming in a simple language. The author has achieved this by treating the subject in the most comprehensive manner. The socio-religious background of the farmers gives it a framework and information on a complete nutritional meal gives a motivation for cultivation of rice, pulses, vegetables, and condiments.

# Commentary

**Y L Nene**[1]

The Asian Agri-History Foundation has so far published two Sanskrit texts on agriculture: (i) Surapala's Vrikshayurveda (c. 1000 AD) which dealt with arbori-horticulture (Sadhale, 1996); and (ii) Krishi-Parashara (c. 100 BC–100 AD) which contained substantial information on prediction of the monsoon rainfall as well as on rainfed agriculture (Sadhale, 1999). The present text, Kashyapiyakrishisukti (c. 700–800 AD) is a detailed text covering not only irrigated rice production in India but also other aspects such as stressing strong support to agriculture from the ruler, stressing participation of people of all castes in farm-related activities, cattle management, describing soil properties, growing pulses on uplands, growing vegetables, fruits, spice crops, and ornamental plants, growing trees, laying out gardens, marketing, and even mining. It is indeed an excellent text on agriculture.

## Support to agriculture by the ruler

Kashyapa has repeatedly stressed the need for a genuine support to farm activities by the king or ruler concerned. In the modern context, this would mean support from the central and state governments. The ruler's support is required (I. 1, 24; II. 87–90, 129) in identifying land for agriculture (I. 32–33, 46, 57–58), building water reservoirs (I. 61, 64, 69–72, 80–82, 89–92), planting trees on the banks of water reservoirs (I. 93, 99), constructing canals and wells (I. 111, 125, 135, 147–150, 155–160, 163), water harvesting (I. 179–181), making seed available (I. 375), ensuring sustenance to people (II. 83), giving donation of land and subsidies to "weaker" people (II. 94–96), arranging markets (II. 106–115), standardizing weights and measures (II. 116–125), afforestation (II. 143–151), locating mines producing metals such as iron, copper, and zinc (brass ?), gold, and silver (II. 158–160), and collecting taxes (II. 173–174). Kashyapa has thus strongly suggested a very major role for the ruler (governments today!) in fully supporting various agricultural activities. He has emphasized that happiness all around can be felt only if there was food security.

## People of all castes were freely encouraged to practice agriculture

Kashyapa has repeatedly stressed that agriculture is a virtuous profession and all people, regardless of their

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status in the society should practice agriculture. The idea obviously was to inculcate dignity of labor and ensure food security for all people. We find the above view expressed throughout the text (I. 47, 173, 189, 197–200, 217–218, 234, 241–242, 408–409, 509–511; II. 36–37, 77–79, 174–175; III. 1–2). Kashyapa must be given full credit for his bold stand because Manu (200 BC) who laid down a code of conduct for the Hindus, discouraged Brahmins from practicing agriculture (Dwivedi, 1959). Likewise Medhatithi (825–900 AD), a Kashmiri scholar, held views similar to those of Manu (Randhawa, 1980). However, Kashyapa held a far more liberal and a sensible view, expressing that agriculture should be practiced by all castes. Kashyapa was probably the only Hindu sage of ancient India who held such a rational view.

## Farming: a noble profession

A study of verses 182–215 in Section I, under the heading "Characteristics of good farmers and village officers" makes a very interesting reading. Kashyapa has stressed that people who practice agriculture should possess good values of life. Farmers should be free from jealousies, be mutually helpful, truthful, compassionate, animal lovers, hospitable to guests, devoid of anger, laziness, and excessive desires, happy with children and relatives, loyal to the king, etc.; all these values should be respected by farmers of all castes. It seems Kashyapa was emphasizing a code of conduct for achieving happiness while pursuing farming. In verses 236–248 of the same section, Kashyapa has claimed the profession of farming as a noble one. He states:

- "Of all wealth, agriculture is the highest wealth." (I. 237)
- "Yielding profuse returns, it (i.e., farming) provides pure grains and other things which please gods." (I. 238)
- "Keeping away dependence on others, always yielding wealth, it provides for the guests, deities, and one's own family." (I. 239)
- "Giving delight in several ways, the profession of farming is indeed praiseworthy. Any other livelihood involves dependence." (I. 240)
- "Hence merited [= qualified] persons, through their own efforts, though endowed with Vedic education [Brahmins], motivated by protection [Kshatriya] or trade [Vaisya], and manual work [Sudras and mixed castes], being truthful and kindhearted always turn to agriculture and are lauded by saints and gods profusely." (I. 241–243)
- "The natural inclination of people towards agriculture pleases gods and must be nurtured with special effort as it sustains life of all beings." (I. 244)
- "Sages are of the opinion that farming activity should be planned and undertaken in every community, in every country, in every rural part, and in every tableland." (I. 245)
- "This undertaking in agriculture is to be pursued by all great men of sharp intelligence to get permanent joy." (I. 248)

Kashyapa obviously had a deep insight into the profession of farming and that is reflected in the above thoughts.

### Soil as a basic resource for successful crop production

Two verses explain clearly what Kashyapa thought about the soils. It is stated in verse 27 of Section I that "land is intended to receive excellence in every age" and in verse 55 of the same section, "A good quality land yields good results to everyone, confers good health on the entire family, and causes growth of money, cattle, and grain." Thus the importance of a good soil can never be overemphasized. Kashyapa states that it is the responsibility of the king to appoint knowledgeable persons, regardless of their caste affiliation, to scrutinize the suitability of land for growing crops (I. 46, 47). Kashyapa points out that a good soil (i) should be devoid of bones and stones (I. 32–33); (ii) should be a plastic clay, with reddish and black hue, full of essence (potency), and glossy with water (I. 34); (iii) should not be too deep or shallow (I. 35); (iv) should be conducive to speedy seedling emergence (I. 37); (v) should be easy for plowing and other operations (I. 37); (vi) should easily absorb moisture and should be inhabited with beneficial living creatures (earthworms ?) (I. 37); and (vii) should have a substantial mass (I. 38). Verse 39 of Section I is interesting; Kashyapa states, "It (soil) may possess Brahmanic qualities, qualities of Kshatriyas, as also those of Vaisyas and Sudras." Using traits normally associated with these castes, one could conjecture that a soil should be fertile and give stable yields; a soil should give yields by controlling enemies such as pests; a soil should give good, sometimes bumper yields; and a soil should give good yield when looked after with close attention, respectively.

A modern soil scientist studies physical properties including the texture of the soil. The procedure described in verses 51 through 54 of Section I is very similar to what is done today.

### Kashyapa was supportive of irrigated crop production

Of the 606 verses in Section I, Kashyapa has written 180 verses on building water reservoirs, canals, and wells and emphasized water harvesting. In fact in verse 178, Kashyapa implies that rain is assured in all places. Clearly Kashyapa was located in a region of India where a good monsoon rain was more or less assured. While Parashara in Krishi-Parashara (Sadhale, 1999) described mainly the rainfed farming, Kashyapa focused his attention on irrigated agriculture.

Kashyapa has given details about where and how water reservoirs should be constructed (I. 61–110). He stressed construction of a reservoir near farmers' fields, ensuring source of water for the reservoir, making strong causeways and thus taking steps to avoid flooding of inhabited areas, and regularly inspecting and repairing the reservoirs, especially during the rainy season. The last one is a good reminder to present-day, lazy, and indifferent staff of the government irrigation departments. Each farmer should have access to two reservoirs (I. 90). Kashyapa's

recommendations on building and maintenance of reservoirs are technically sound.

Kashyapa recommended planting of trees around water reservoirs obviously to protect and beautify them (I. 93–110). He suggested picnic spots around reservoirs (I. 101), a feature that is considered "modern" in the 21st century.

Construction of canals has been indicated in verses 111 through 143 of Section I. Kashyapa has mentioned four sources of canal: (i) river; (ii) tank which could have been filled by a river; (iii) large lake; and (iv) canals collecting water from mountain cascades. Kashyapa has stressed provision of a proper gradient for the canals and a network of these canals surrounding villages. He emphasized selection of soil with right structure and profile for making canals and avoiding saline soils. Protection of the canal system, like the protection of reservoirs, was also stressed.

Kashyapa recommended construction of wells, especially in areas where canal water was not available. Best time for digging wells was the postrainy season. He suggested study of indicators for the presence of subsoil water such as existence of trees and of course, water divining. He stressed laying strong foundation with bricks and building walls with bricks and mortar. Even provision of steps to enter a well was recommended. Kashyapa has mentioned the use of *ghatiyantra* (the so-called Persian wheel) with the help of bullocks, elephants, and humans. Camels were not mentioned in this context.

Harvesting of rain was stressed (I. 178–181). A verse that says everything about water for farming is: "It may be a canal, a well, a pool, or a lake; but find they must and acquire a guaranteed source of water." (I. 177)

## Arranging good quality tools, implements, and other resources (I. 249–271)

Kashyapa has specifically indicated use of strong wood for various purposes (e.g., making a tying post) such as *tinduka* (*Diospyros melanoxylon*), *tinisha* (*Ougeinia oojeinensis*), or *sarjaka* (*Vateria indica*). Manure should be available and used for increasing the 'potency' of the land. Besides plow, spades, lancets, small horns (for breaking soil crust ?), knifes, sickles, ropes, etc. were mentioned. Plowing was to begin with the visibility of rain-bearing clouds and plots were to be filled with water for puddling to prepare for planting paddy.

One of the wonderful features of the Vedic teachings is to express gratitude to everything that is useful, be it animate or inanimate. That is why Kashyapa refers to worship of plow as well as bullocks (I. 272–286). What is said during the ritual of worship is significant. For example, bullocks must not be made to overwork (I. 286); and asking pardon for any injuries to Goddess Earth during plowing (I: 274–276). How could anyone abuse the soil when such are the sentiments held!

## Selection of good cows and bullocks (I. 287–320)

Since cows and bullocks constituted wealth and were vital for farming, cows for milk and bullocks for the draught power, Kashyapa has expressed his views on

the subject. Though white cows were to be preferred (288–289), colored cows were acceptable (289–292, 302). The cattle of medium height, attractive eyes, and deep voice were recommended (288–289). Horns were to be neither too long nor thin and were to be symmetrical (293). Hooves were to be healthy-looking (294–295). Animals were to have graceful gait and long tail (294–295). Long tail probably enabled cattle to have a long sweep to scare away flies and other insects effectively. The animals were to be neither fat nor thin, but physically strong (295–296). Thin hair on skin was preferred.

Interestingly, Kashyapa tried to classify bullocks using the traits associated with the various castes of humans (288–292), but recommended all as acceptable. Basically he was describing the natural behavioral traits found in cattle. Purity of breeds was stressed (303, 309). Donation of cows was considered a highly desirable act (320).

Management (feed and fodder, hygiene, treatment of ailments, and general attention) of animals was to be given utmost importance (304–312). Buffaloes and goats were also mentioned along with cows and bullocks (304–305, 318).

The following statement by Kashyapa sums up his views on the subject of cattle. "Rain undoubtedly falls in that country where a thousand cows are tended affectionately. [Sage] Bhargava has said that gods get highest pleasure from protection and donation of cows and this leads to the welfare of people." These views are held by the Hindus today.



From the description of cows and bullocks given by Kashyapa, it is likely that he was referring to the breed known today by the name Ongole, which is predominant in Guntur and Nellore in Andhra Pradesh (Singh, 1994).

### Planting time and selection of land for different crops (I. 323–340)

Before doing anything else Kashyapa suggested to "develop yielding capacity of the fields" regardless of the crops chosen for cultivation (323). This is a very significant statement with clear implication on sustainability of the land. The planting should be commenced with the beginning of the rainy season in several "countries" listed (324–326). These are: Kasmira (Kashmir), Vanga (West Bengal and Bangladesh), Nepala (Nepal), Panchala (parts of western Uttar Pradesh—Bareilly, Budaun, Farrukhabad), Kosala (Oudh in central Uttar Pradesh), Kuru (Delhi and upper Gangetic region), Virata (a region in northern Bengal), Avanti (Malwa and Nimar regions of western Madhya Pradesh), Malava (southwestern Madhya Pradesh), Saka (east of Iran ?), Sindhu (Sind in Pakistan), Sauvira (lower Indus Valley, east of the river), Surasena (present Agra division of Uttar Pradesh), Chedi (eastern part of modern Bundelkhand of Uttar Pradesh and Madhya Pradesh), Konkana (present Konkan on western coast of India), and Andhra (deltas of Godavari and Krishna rivers). No "country" south of the Krishna river has been specifically mentioned. In most of these "countries", the Southwest monsoon constitutes the rainy season. Kashyapa has mentioned taking a crop even in summer if water was available (326–328).

Kashyapa divided arable lands into two major categories; viz., lands suitable for growing rice (paddy) and lands suitable for other crops. Basically, low-lying lands which could be irrigated easily were meant for rice, whereas the uplands where water supply was limited were meant for other crops such as pulses. Rice fields were to be of higher fertility than fields under other crops (330–332) and were to be bunded to retain water but the bunds had to have openings to allow excess water to flow elsewhere. Rice soils were to be clayey and rice fields close to each other and to the threshing ground (332–334). Rice fields were always to have standing water (338).

Kashyapa stated that fields for pulses, etc. were to be highlands and were considered of second quality. These crops needed less water, and no one planned any irrigation for them. Kashyapa's view above is held even today, except that certain new varieties of pulses and other crops are given occasional irrigation.

## Collection and preservation of seeds

Procuring and preserving seeds of various crops was considered one of the most important activities. In order of importance, Kashyapa listed rice and other cereals as the first, pulses and other grains as the second, vegetables (including fruits) the third, and creepers and flowers, etc. the fourth (I. 354–355).

### Varieties of rice (I. 362–373)

In the verse 362, Kashyapa considered three main varieties of rice; viz., *shali, kalama,* and *shastika*. In the next two verses (363–364), he stated: "*Kalama* is slightly thick, white, and with a surplus sap. *Shastika* is made tasteless by the creator. *Shali* rice is said to have twenty-six varieties depending on the quality of land in different regions." In verse 365 it is stated that "sowing of these various seeds has to be undertaken in seasons suitable for a particularly variety." These verses can be interpreted thus; there are three groups of rice varieties, *shali, kalama,* and *shastika*. *Shali* rice varieties apparently were favored more than the other two. *Kalama* was small-grained, and *shastika* (60-day variety) was clearly an inferior type. Kashyapa mentioned that different varieties of rice were to be grown on different kinds of soil and under different weather conditions.

All this makes sense. However, in verse 364, Kashyapa mentioned that *shali* rice has 26 varieties. But when one reads the names of these 26 varieties, one gets confused after noting names of *kalama, vrihi, sambaka,* all mixed up with *shali* (362–373).

*Vrihi* is considered to be the oldest name for rice. We find *shukla vrihi* (white rice) mentioned in Krishna Yajurveda (3000 BC). In the same Veda, *krishnanam vrihini* (black rice), *asunam vrihinam* (fast growing, 60-day rice), *mahavrihinam* (large-seeded rice), and *naivaram* (wild rice) have been mentioned. In the subsequently compiled Atharvaveda, *naivaram* became *nivara* and in addition to black rice, red rice and the 60-day rice were mentioned. A new name for rice appeared in the Atharvaveda; i.e., *tandula* (for dehusked rice).

The word *vrihi* for rice was used in Upanishads. It is only in the Pali language (the Buddhist period, 500 BC) that the word *shali* for rice appeared on the scene. *Shali* was used for those rices which were planted at the beginning of the rainy season and harvested in winter; these were probably the 6-month varieties (Kumar, 1988). *Vrihi, shali, nivara, shastika* as well as a new word *kalama* appeared in Susruta Samhita (400 BC) and Amarkosha of Amarsinha (200 AD) (Jha, 1999). Buddhist literature commonly used the word *shali* for rice. In Apte's Sanskrit-English dictionary, the definition of *kalama* is similar to that of *shali*; i.e., sown in May–June and harvested in December–January. However, another meaning of the word *kalama* is pen. In the same dictionary, the word *sambaku* means "to plow twice". Susruta mentions *vrihi* as rice and considers the word to be arising from the word *vrihi* which means to "throw" or "hurl" (Krishnamurthy, 1991).

Taking the above discussion into consideration, I would like to suggest that the oldest word, *vrihi* for rice (paddy) meant rice that was broadcast in the field for sowing. As the transplanting was introduced and the duration of the crop increased, the word *shali* was coined, and it became the most commonly used word. *Kalama* also means "a reed for writing". I am tempted to suggest that the name *kalama* was used for *shali* varieties which had strong, thick tillers, which in old times could be used as pens for writing. The word *sambaka* apparently has originated from *sambaku* which means, as pointed out before, "to plow twice". This may be a reference to an old practice of double transplanting of long-duration varieties to reduce the duration. Today rices with names as *samba* (Tamil), *sambavu* (Telugu), and *sambanellu* (Kannada) usually refer to fine, superior varieties. The word *samba* is also used for a rice season (July 15 to January 14) in Tamil Nadu (Arumugasamy *et al.*, 2001).

Although Kashyapa mentions 26 varieties of *shali* and *vrihi* rices (364, 373), the names given in verses from 366 through 372 reveal 4 varieties of *shali* group, 5 of *kalama* group, 4 of *sambaka* group, 11 of *vrihi* group, and 2 of *nivara* group.

It is possible that as rice cultivation technology improved further after Kashyapa's time, agronomic practices of one group of rices might have been applied to another. Thus *vrihi* types which were originally meant for broadcast might have been transplanted.

Attempts made by Kashyapa and his predecessors to classify rice types, using planting method, duration, color of paddy husk, taste, shape and size of grain, extent of swelling after cooking, and medicinal properties deserve full appreciation and recognition.

**Golden rice**

Currently there is a talk about the genetically modified "golden rice", which is claimed to be a potential solution to eliminate vitamin A deficiency among the poor people of India. While the issue is being debated, I am wondering if *peetvarna vrihi* (yellow rice) (I. 372), which Kashyapa claimed to improve digestion, or a *sambaka* variety called

*hema* (golden) (I. 367) could have been sources of vitamin A. Can we take another look at our existing rice germplasm and analyze "golden colored" genotypes for the vitamin A content?

### Rice varieties—other aspects (I. 374–410)

Some of the other highlights under the topic on collection and preservation of seed are: (i) it is the king's (government in today's context) responsibility to ensure seed supply (375); (ii) seed must be properly dried in sun (374); (iii) giving a gift of seed is a superior act (376); (iv) different varieties of rice mature at different times taking 3 to 8 months (377–379); (v) farmers should respect traditional knowledge of the region and use it (379–380); (vi) seeds of all kinds of other crops should be likewise collected, dried, and stored in pots, heaps of husk, or bowls (403–404); and (vii) seed must be protected from rabbits, rats, and cats, and moisture (405).

One verse (407) beautifully explains the importance of seed. "Taking care of good seeds religiously is conducive to the benefit of farmers [as has been] said by great sages."

### Plowing procedure (I. 412–427)

Kashyapa recommends plowing operations for sowing/planting rice and bulbous crops (412–414). Leveling of soil and manuring was mentioned (422). Puddling of soil for rice was also mentioned (414). Sowing by broadcasting seed (415) or by transplanting sprouts with proper spacing was recommended (416). For bulbous crops, the propagating units were to be placed in furrows or pits (419–421). Once again, Kashyapa advised to respect traditional practices followed in a region (427).

### Cultivation practices for grain crops (I. 428–525)

Although the title of this section mentions grain crops, all the verses relate only to rice. Practices described are similar to the practices followed today. Some of the highlights of this sub-section are: (i) rice crop grown in the "country" of Kosala (Oudh in central Uttar Pradesh) was considered to be the best (428); (ii) among different rices, *kalama* rices were to be planted first (probably these were of long duration) (429); (iii) wherever a reservoir was shared, all the concerned farmers were to carry out operations in groups, using 10 pairs of bullocks (440–443), a good prescription for cooperation; (iv) arrangements to drain off excess water were to be made (437); (v) seedlings grown in nurseries were to be taken out, fastened in bundles, and transplanted in manured, puddled soil in lines by workers (433–436); (vi) gaps were to be filled in to ensure good plant stands (439–440); (vii) seedlings normally established in 17 days (445–446) and growth was evident in about a month (448–449); (viii) weeding was to be carried out thoroughly, especially grasses like *Erianthus munja* (*munja*) (450–456); (ix) water was to stand in fields all the time till the grain-filling stage was over (468–472) and then drained afterwards (478–479); (x) protection from parakeets at grain-filling stage (467) as well as from rats, insect pests, and other animals (475, 481); (xi) harvesting to be done with nippers and then drying and threshing using animals, and followed by winnowing

(483–495); (xii) storage of grain in containers, masonry or grass structures, glass vessels, or underground space to protect from moisture, storage insects, and thieves (497–501); (xiii) leftover crop residue to be stored for use as dry fodder for animals (503–508); and (xiv) raising a second crop of rice in the same field if water was available (514–525) following the procedures highlighted above. Special mention to additional application of manures including green manure has been made (518) for the second rice crop.

## Cultivation of pulses and other crops (I. 526–606)

This sub-section deals with grain legumes (pulses) such as pigeonpea, chickpea, black gram, mung bean, and horse gram (*kuluttha*) (526, 534, 535), cereals such as emmer (wheat) and barley (559, 583), millets like kodo millet (*Paspalum scrobiculatum*) (584), oilseeds such as sesame (526, 534), castor (545), and mustard (546), spices such as cumin (527) and black pepper (545), and other crops such as sugarcane, banana, and cotton.

Kashyapa classified these crops as mainly upland crops (535–536) in contrast to rice which is grown in lowlands, and mentioned that these required less water (532–534). Kashyapa, however, expressed difference of opinion with another sage, Bhargava, and stated that pulses could be grown in rice fields (obviously on residual moisture) (540–541). Let us note that he did not recommend emmer (wheat) after rice. It is evident that by the time of Kashyapa, agronomy of the commonly grown crops was sufficiently well-understood. Practices mentioned were pre-sowing irrigation, sowing, weeding, liberal top dressing with organic manure after weeding, and watering near roots if necessary (543–557, 560). Top dressing with organic manures was an interesting practice that is not followed today. Generally in these crops, seedlings emerged in 4 to 6 days, depending on the quality of land. At maturity, leaves of pulse crops dropped and duration of maturity was 3 months or more, depending upon the variety, cultivation practices, and soil type (563, 565–566). Other operations stated were harvesting, threshing, cleaning, drying, and storage.

Kashyapa has repeatedly stressed utilization of as much land as possible (581–582). He suggests saving crop residues for use as animal feed (568–574).

It should be noted that crops like barley (583) and emmer (wheat) (559), though recommended for cultivation, were of minor importance in the region covered by Kashyapa.

Sugarcane was another crop recommended for both lowlands and uplands (587, 588). Method of planting sugarcane setts in pits made in rows is very interesting and differs from today's planting in continuous trenches. However, only recently I read about a claim of higher yields if sugarcane seedlings are transplanted in pits [Sankpal, V.Y. and Jadhav, A.S. 2002. Baliraja (in Marathi) 33(1):44–46]. Though planting in pits would result in less plant population per unit area, there could be advantages in terms of less incidence of soilborne diseases and pests, and more tillering. Kashyapa stated that sugarcane and banana were never propagated by seeds (588, 589). Planting time recommended was autumn

or the "season of the region" (589, 590). Sprouting occurred in 10 days (591). Regular watering of pits was recommended (593–594). The name *pundra* appears with sugarcane in several Sanskrit texts (588). Protection of sugarcane crop from strong winds has been specifically emphasized (595).

Kashyapa stated that there were many varieties of banana, and the plants grew on varied lands, but not on saline soils (595–600). For cotton, two names were mentioned (602–603). These were *pichu* and *tula*, obviously both "tree cottons". *Tula* also means *Morus alba* used for rearing silkworms, but it is unlikely that Kashyapa was referring to silk.

## Cultivation of vegetables, fruits, trees, and other topics (II. 1–178)

This section deals with several commodity products including vegetables, such as eggplant (brinjal), different cucurbits, elephant-foot yam (*surana*), and a few others; spice crops such as coriander, turmeric, ginger, cinnamon, cardamom, long pepper, etc.; fruit trees such as mango, jackfruit, citrus, plantain, grapes, Java plum (*jambu*), etc.; areca-nut; ornamentals such as various species of jasmine; betel leaf; types of gardens; forestry; market related matters; mining for metals such as iron and gold; and subjects such as subsidies and taxes. In other words, by including marketing, taxes, etc., Kashyapa extended his text on *krishi* to what was known as *varta* (agriculture, animal husbandry, and trade) during the time of Kautilya (c. 300 BC) (Shamasastry, 1961). A large number of verses relate to vegetables. Names of some vegetables can be identified, but a few names remain unidentified. We know that the range of vegetables in India was restricted to eggplant (brinjal), several cucurbits, some beans (*Dolichos* spp.), onion, and elephant-foot yam (*surana*) until the Turks and Arabs and later the Europeans introduced several new vegetables.

Kashyapa recommended vegetable cultivation by following the traditional practices of the region (11–12). He pointed out that there were varieties of each vegetable species, and these expressed different forms, taste, and color in different "countries" (5–10). Kashyapa encouraged growing vegetables in villages, towns, forests, and near residences (19–20), mainly in spring and summer and rarely in winter (21, 69–70). The recommendation on growing season makes sense because most of the vegetable crops grown in India at that time were warm-season crops. Summer crops could be taken in wetlands (29). Some of the highlights about raising vegetables were: (i) eggplant (brinjal) seed, sun dried, should be sown in a well-manured nursery, and then seedlings should be transplanted in rows in well-manured "basins", which would facilitate retention of water (26–27, 40, 41), (ii) gourds, which also have wild types, needed support for climbing (28); (iii) vegetables should be harvested at various stages, depending upon their use as food such as leaves, flowers, fruits, or roots (55–56, 59–62); (iv) all parts of vegetables including rinds of fruit were good for health (71–72); (v) almost all parts of plantain were edible (57–58); and (vi) insect pests chewed leaves and made them look like nets (*Epilachna* beetle damage ?); this damage could be checked by

dusting ash on leaves and sprinkling water containing mortar (lime or gypsum) (49–50). Ash is dusted on plants to control insect pests even today.

**Wisdom regarding human nutrition**

From the viewpoint of human nutrition, Kashyapa has made very significant statements in verses 12–15 (Section II). He stated:

"Varieties of rice are first in the priority list. The grains (pulses) for preparation of soup are second. Vegetables come third, and ghee (clarified butter), milk, etc. the fourth. These four together are stated to make a complete meal. This heightens the pleasure of gods. This food brings stability to human life by providing nourishment and health. It sharpens the intellect and enhances the span of life."

Thus according to Kashyapa the food that included cereals, legumes, vegetables (fruits), and milk products constituted complete food for human health. This wisdom of more than a millennium old still holds true. In the Times of India (Hyderabad edition, 20 July 2001), an interview of a famous Indian nutritionist, Dr C Gopalan, President of the Nutrition Foundation of India was published under the title "Feeding Body and Mind". Gopalan stated the following:

"The green revolution helped us stave off famine. It increased wheat and rice output, but we neglected those elements necessary for the quality of the diet. Wheat and rice provide energy and some micronutrients, but foods that provide quality are pulses, legumes, fresh fruits, green leafy vegetables and milk. Intake of these products is not going up to the extent required."

Regretfully, Gopalan did not even once mention the ancient Indian wisdom on human nutrition in his communication.

**Garden, forests, subsidies, mining, etc.**

*(Verses are from Section II.)*

Kashyapa did not describe designs of gardens, but mentioned that there should be gardens around temples (137–138), with palaces (134), for ladies (139), and for general public in the suburbs (140). Gardens should contain fruit trees (133–134), plants that produced fragrant flowers in all seasons, and also the medicinal plants.

Afforestation was recommended on lands earmarked for forests, in outskirts, or inside existing forests, and on mountain slopes (141). A large number of trees was suggested for forestry (143–151). These forests were to be protected from fire, harmful animals, and thieves. Kashyapa recommended afforestation in "countries" such as Gandhara (northwestern Pakistan including Peshawar and Taxila), Kunti (?), Panchala (parts of western Uttar Pradesh—Bareilly, Budaun, Farrukhabad), Kasmira (Kashmir), Avanti (Malwa and Nimar regions of western Madhya Pradesh), Sindhu (Sind in Pakistan), Nepala (Nepal), Nisadha (region near Vidharbha in Maharashtra), Kosala (Oudh in central Uttar Pradesh), Anga (Bhagalpur, Monghyr, and possibly western Purnea of Bihar), Gurjara (parts of Kathiawar and adjoining areas), Saurastra (rest

of Kathiawar in Gujarat), and many other "countries". In the list of "countries" the area covered was mostly central and northern India from Gujarat to Bihar, and Pakistan.

Kashyapa has once again stressed the supportive role of the ruler (86–91, 97, 127, 129, 170–172). Provision of subsidies to the needy (92–94), and making available irrigation equipment such as the "Persian" wheel (94–96) was indicated. The rulers were expected to have royal farms to meet the needs of poor people (97–100, 103–105), to have facilities for selling produce in markets (106–113), standardizing measures, weights, and related equipment (116–125), and to collect fair amounts as taxes from farmers (173–175).

It is interesting that Kashyapa covered the subject of mining metals in continuation of forestry. He recommended looking for indicators for mines of metals in mountains and forests (158–159). Mining of iron, brass (?), gold, silver, and red ocher has been mentioned (159, 160). Work on developing implements and tools was required to be carried out to facilitate the work of blacksmiths, carpenters, goldsmiths, and farmers (160–163).

## Changes in agricultural technologies

The following statements reveal how Kashyapa advised change in technologies with changes in time, something we talk all the time today in relation to sustainable agriculture.

"As time changes the king should take into account a change in the manner and mode of agricultural technique for sowing of seeds, and also consider the application of agricultural [science] as different for cool and warm climates" (II. 168–169). "Cattle, rainfall, water reservoirs, and many other factors also cause this change. Accordingly, the king should manage the farming activities, depending primarily on the quality of the soil" (II. 170–171).

## Edibles and non-edibles (III. 1–42)

In Section III, a small section, Kashyapa composed 42 verses on the subject of what should or should not be eaten, especially by the Brahmins. Most of the verses (6, 10–26, 33–36, 38, 41–42) are related to hygiene and contain recommendations on avoiding eating food that was prepared or stored under unhygienic conditions. There were some food items that the Brahmins of the time were not served. These included preparations from *pilu, kodrava* (kodo millet), *shubha* (*priyangu*), white varieties of eggplant (brinjal), garlic, shallot, normal onion, mushrooms, large ash gourd, *panna,* and *shigru* (drumstick) (7–9). Kashyapa also advised not to eat foods mixed with curd or sesame in the night, but no reasons were given. Also to be avoided were milk of camel, or an animal whose hoof was not cloven, milk mixed with salt, milk of a young woman, milk of a cow that had no calf or milk that exuded after a calf was born, impure milk of a female goat, and milk placed in a copper vessel. Some of the above restrictions exist even today.

### Kashyapa emphasized respect for traditional knowledge

Kashyapa has repeatedly stressed that traditional practices of the region concerned should be respected and followed (I. 305–306, 379–380, 426–427, 522–525, 540–542, 547–548, 589–590; II. 11–12, 42). This is a very important message to the agriculturists of today. Production of crops must always be based on the core traditional methods. This does not mean that changes to improve cultivation should not be incorporated. Kashyapa himself has written about changes that should occur (II. 168–171). However, these changes must be gradual and after careful considerations. "Green revolution" of the 1960s was required for India, but now the time has come to reintroduce our traditional practices to consolidate the gains of the "green revolution", discard the harmful practices introduced advertently or inadvertently during the years of "green revolution", and move towards a truly sustainable agriculture.

### Which region of India has been covered by Kashyapa in the Krishisukti?

A look at all the plant species mentioned in the text fails to give any precise idea about the region, the agriculture of which has been described by Kashyapa.

According to Randhawa (1980), Kashyapa possibly was a resident of Kosala (Oudh in central Uttar Pradesh). Wojtilla (1985) suggests that Kashyapa followed the "Vaishnava" tradition of South India and wrote the text sometime during 700 to 800 AD. I find myself in agreement with Wojtilla's view, although one must accept the wide knowledge that Kashyapa possessed with regard to agriculture of several regions of the Indian subcontinent. I would like to suggest that the main focus of Kashyapa was the Krishna-Godavari deltas and the adjacent regions. My reasons are:

- Kashyapa describes the region of assured rainfall and of large quantities that would fill reservoirs for taking irrigated crops all the year round, especially more than one crop of rice in a year.
- Clayey, red to black soils, with good bulk density is mentioned (I. 34, 38, 52, 53).
- The basic breed of cow described as desirable was most likely what we recognize today as the Ongole breed.
- Words such as *sambaka* and *kalama* are still used for rice types in southern India.
- At least 80 plant species, of the 125, exist today in the state of Andhra Pradesh.

Incidentally, the technique of transplanting rice was widely practiced in Krishna-Godavari deltas in 100 AD (Randhawa, 1980). The Chinese had independently developed the transplanting technique around the same time (Needham, 1984).

Wojtilla (1985) has stated: "The date of the work in its present form is uncertain but there is a good reason to date the core of the work to the 8–9th centuries AD. There are numerous interpolations belonging to a later age. Even some quite modern passages occur." Wojtilla

(1985), however, provides no information to support his opinion of "numerous interpolations belonging to a later age".

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# Appendix

# Appendix 1: Plant Index

**Plant names mentioned in the Sanskrit text and English translation.[1]**

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *adhaka* | pigeonpea | *Cajanus cajan* (L.) Millsp. | I (332, 339, 340, 342, 343, 526, 531, 533, 534, 543, 554, 558, 559, 561, 566, 569, 571, 572, 577, 579, 601); II (102, 104, 116); III (3) | AP, UP, MP, Bi, MS, Ka |
| *agastya* | agati sesbania | *Sesbania grandiflora* (L.) Poir. | I (585) | India |
| *amala/ki/ka* | Indian gooseberry | *Emblica officinalis* Gaertn. | I (396); II (147) | India |
| *amra* | mango | *Mangifera indica* L. | I (105); II (34, 66, 150) (see *chuta* and *rasala*) | India |
| *ardraka* | ginger | *Zingiber officinale* Rosc. | II (48, 72) (see *shunthi*) | Ke, UP, WB, MS, HP, AP |
| *arjuna* | arjun | *Terminalia arjuna* (Roxb.) Wight & Arn. | I (400); II (145) | India |
| *ashoka* | asoka tree | *Saraca asoca* (Roxb.) de Wilde | I (397); II (148) | India |
| *asvattha* | pipal, bo tree | *Ficus religiosa* L. | I (94) (see *chaladala*) | India |
| *atimukta* | | *Hiptage benghalensis* (L.) Kurz | I (394) | India |
| *bada/ra/ri* | jujube | *Ziziphus mauritiana* Lamk. | I (400); II (150) | Pb, UP, Bi, Rj, MS |
| *bhadradaru* | long-leaved pine | *Pinus roxburghii* Sarg. | II (146) | W and E Himalayas |
| *bhurja/ka/ra* | Indian birch | *Betula alnoides* Buch.-Ham. | I (94, 395); II (144) | temperate and subtropical India |
| *bibhitaka* | belleric myrobalan | *Terminalia bellirica* (Gaertn.) Roxb. | I (396) (see *vibhitaka*) | deciduous forests (India) |
| *bilva* | bael, Bengal quince | *Aegle marmelos* (L.) Corr. | II (135) | India |
| *chaladala* | pipal, bo tree | *Ficus religiosa* L. | I (399) | (see *asvattha*) |
| *champaka* | champac | *Michelia champaca* L. | I (105, 175); II (102) (see *peetapushpa*) | S and E India |
| *champeya(ka)* | iron-wood | *Mesua ferrea* L. | I (394); II (41, 149) | E, W, and S India; Andaman |
| *chanaka* | chickpea | *Cicer arietinum* L. | I (340, 384, 526, 535, 544, 554, 559, 572, 577, 601); II (2, 104); IV (17) | India |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *chandana* | white sandal wood | *Santalum album* L. | II (132) | Peninsular India |
| *chuta* | mango | *Mangifera indica* L. | II (150) | (see *amra*) |
| *dadima* | pomegranate | *Punica granatum* L. | I (397); II (148) | India |
| *dhanya* | rice | *Oryza sativa* L. | I (373, 487, 579) | (see *vrihi*) |
| *dhanyaka* | coriander (seed) | *Coriandrum sativum* L. | I (390); II (38) (see *kustumburu*) | MP, MS, Rj, AP, TN, Ka, Bi |
| *devadaru* | deodar | *Cedrus deodara* (Roxb. ex Lamb.) G. Don | I (395); II (145) | NW Himalayas |
| *draksha* | grape | *Vitis vinifera* L. | I (393); II (10, 53, 67, 104); IV (11) (see *rasaka*) | Pb, Rj, UP, MS, Ka, AP, TN |
| *ela* | cardamom | *Ellettaria cardamomum* Maton | I (393); II (10, 32, 53, 67, 72); IV (11) | Ka, Ke, TN |
| *eranda* | castor | *Ricinus communis* L. | I (387, 545); II (144) | AP, MS, Ka, Or |
| *godhuma* | emmer (wheat) | *Triticum dicoccum* Schubler | I (384, 544, 554, 559, 564, 572, 576); IV (10, 15, 17) | Ka, MS, AP, Nilgiris |
| *granjan* | shallot | *Allium ascalonicum* L. | III (7) | S India |
| *haimavati* | yellow myrobalan | *Terminalia chebula* Retz. | II (147) | India |
| *haridra* | turmeric | *Curcuma domestica* Val. | I (391); II (7, 30, 48) | TN, AP, MS, Bi, Ke, Or |
| *ikshu* | sugarcane | *Saccharum officinarum* L. | I (385, 585, 586, 587, 590, 595, 597, 599); II (33, 61, 73) (see *pundra*) | India |
| *jambira* | lemon | *Citrus limon* (L.) Burm. f. | I (400); II (53, 134) | Pb, UP, MS, Deccan |
| *jambu* | Java plum | *Syzygium cumini* (L.) Skeels | I (398); II (34, 148) | India |
| *jati* | (Hindi: *chameli*) | *Jasminum grandiflorum* L. | I (35) | India |
| *jatika* | nutmeg (?) | *Myristica fragrans* Houtt. | I (388); II (5, 22) | Nilgiris, Ke, Ka, WB |
| *jatila* | | | II (38) | |
| *jiraka* (?) | cumin | *Cuminun cyminum* L. | I (386, 527, 545) | Pb, UP |
| *kadali* | plantain | *Musa paradisiaca* L. | I (392, 420, 426, 588, 595, 596, 597, 599); II (33, 57, 66, 73); IV (27) (see *mocha* and *rambha*) | As, MP, Bi, Gj, AP, Ka, MS, WB, TN, Ke |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *kadamba* | kadam | *Anthocephalus cadamba* (Roxb.) Miq. | I (95); II (145) | India, especially As, WB, Andaman |
| *kalama* | rice | *Oryza sativa* L. | I (362, 363, 366, 367, 429, 459, 462, 476, 485, 501, 556) | (see *vrihi*) |
| *kalata(ka)* | Ceylon gamboge (?) | *Garcinia morella* (Gaertn.) Desr. (?) | I (390); II (6, 47) | Khasi Hills, W Ghats |
| *kanisha* | corn, maize | *Zea mays* L. | I (568) | UP, Pb, MP, Bi, AP, J&K |
| *kapittha* | wood-apple | *Limonia acidissima* L. | I (398); II (148) | India |
| *karanja* | pongam | *Pongamia pinnata* (L.) Pierre | I (395); II (144) | Deccan, WB, Ke |
| *karnika* | Indian white rose | *Rosa alba* L. | II (149) | India |
| *karnikara* | (Hindi: *kanak champa*) | *Pterospermum acerifolium* Willd. | II (147) | MS, Ma, WB, Bi, As |
| *karpasa* | Asiatic cotton | *Gossypium herbaceum* L. | I (606) (see *pichu* and *tula*) | MS, TN, AP, Ka |
| *kasha* | thatch grass | *Saccharum spontaneum* L. | I (401); II (135) | India |
| *kata* | clearing nut tree | *Strychnos potatorum* L. f. | I (390) | WB, Or, MP, W Peninsula |
| *kavaka* | mushroom | *Agaricus campestris* L. | III (8) | India |
| *khadira* | catechu | *Acacia catechu* (L. f.) Willd. | I (94) | Pb, MP, UP, Bi, AP, Or, Rj |
| *kharjura* | date palm | *Phoenix dactylifera* L. | I (36); II (53) | Pb, Rj |
| *kira* (?) | | | I (544, 576) | |
| *kiraka* (?) | | | I (384) | |
| *kodrava* | kodo millet | *Paspalum scrobiculatum* L. | I (384, 544, 583, 584); III (7) | India |
| *kovidara* | St. Thomas tree | *Bauhinia tomentosa* L. | II (151) | S India, As, Bi |
| *kramuka* | areca-nut | *Areca catechu* L. | I (393) | (see *puga*) |
| *kuluttha* | horse gram | *Dolichos uniflorus* Lam. (Syn. *D. biflorus* auct. non L.) | I (385, 526, 544) | AP, Ka, TN |
| *kumkuma* | saffron | *Crocus sativus* L. | I (259); IV (11) | J&K |
| *kunda* | | *Jasminum multiflorum* (Burm. f.) Andr. | I (105, 394); II (41) | India |
| *kurabaka* | | *Barleria prionitis* L. | II (149) | India |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *kusha* | (Hindi: *kusa*) | *Desmostachya bipinnata* (L.) Stapf | II (135) | India |
| *kushmanda* | ash gourd | *Benincasa hispida* (Thunb.) Cogn. | I (390); II (6, 32, 38, 47, 52, 60, 67); III (9) | UP, Pb, Rj, Bi |
| *kustum/buru/ba* | coriander (leaves) | *Coriandrum sativum* L. | I (390); II (6) | India (see *dhanyaka*) |
| *kutaja* | | *Wrightia tomentosa* (Roxb.) Roem. & Schult. | I (35); II (41) | Pb, Rj, Bi, As, MS, W Peninsula |
| *lashuna* | garlic | *Allium sativum* L. | III (7) | India |
| *lavanga* | clove | *Syzygium aromaticum* (L.) Merr. & Perry | II (72) | Ke, TN |
| *likucha* | lakoocha | *Artocarpus lakoocha* Roxb. | I (396); II (34, 53, 61, 147) | UP, WB, Khasi Hills, W Ghats |
| *madhuka* | mahua; mowra fat | *Madhuca indica* J. F. Gmel.; *M. longifolia* (L.) Macb. | I (399); II (151) | UP, AP, Bi, Ka, WB, MS |
| *malati* | (Hindi: *chameli*) | *Jasminum grandiflorum* L. | I (105); II (41, 67) | India |
| *malli(ka)* | Arabian jasmine (Hindi: *mogra*) | *Jasminum sambac* (L.) Ait | I (35, 394); II (102) | India, especially UP |
| *marichi* | black pepper | *Piper nigrum* L. | I (386, 527, 531, 545, 579); II (22); III (3) | W Ghats, Ka, MS, As, Ke |
| *maruvaka* | emetic nut | *Randia spinosa* Poir. | II (145) | MS, Gj, UP, TN, sub-Himalayan tract |
| *masha* | black gram | *Vigna mungo* (L.) Hepper | I (383, 526, 531, 533, 534, 539, 541, 543, 554, 557, 559, 561, 562, 572, 576); II (104); IV (13, 15, 17) | India |
| *matulunga* | citron | *Citrus medica* L. | I (401); II (134) | Ut, Si, Khasi Hills, W Ghats |
| *mocha* | banana | *Musa paradisiaca* L. | II (34, 134) | (see *kadali*) |
| *mudga* | mung bean | *Vigna radiata* (L.) Wilczek | I (384, 526, 533, 534, 544, 554, 576, 577, 601); IV (10, 15, 17) | India |
| *munja* | (Hindi: *munj*) | *Erianthus munja* (Roxb.) Jesw. | I (452) | Pb, UP |
| *nagavalli* | betel | *Piper betle* L. | I (393); II (32, 33) (see *tambula*) | India |
| *naktamala* | Indian laburnum | *Cassia fistula* L. | I (395); II (144) | India |
| *nalada* | cinnamon | *Cinnamomum zeylanicum* Blume | I (393); II (10, 32, 135) | W Ghats |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *nalada* (= *usira*) | vetiver | *Vetiveria zizanioides* (L.) Nash | I (393) | Rj, UP, Pb, W Coast |
| *narikela* | coconut | *Cocos nucifera* L. | II (35, 61, 66) | S India |
| *nimba* | neem, margosa | *Azadirachta indica* A. Juss. | I (95, 396); II (147) | India |
| *nipa* | yellow teak | *Adina cordifolia* (Roxb.) Hook f. ex Brand. | I (400); II (145) | India |
| *padma* | orchid | *Habenaria rotundifolia* Lindl. | I (36) | most of India |
| *palandu* | onion | *Allium cepa* L. | II (10); III (8) | India |
| *palasha* | flame of the forest | *Butea monosperma* (Lamk.) Taubert | I (399) | India |
| *panasa* | jackfruit | *Artocarpus heterophyllus* Lamk. | I (105); II (34, 60, 67) | India |
| *panna* (?) | | | III (9) | |
| *paribhadra(ka)* | coral tree | *Erythrina variegata* L. var. *orientalis* (L.) Merr. | I (399); II (151) | India |
| *patola* | pointed gourd | *Trichosanthes dioica* Roxb. | II (64) | UP, Bi, WB, As |
| *patolika* | cucumber (Hindi: *khira*) | *Cucumis sativus* L. | I (388); II (5, 28, 38, 47, 52, 59) | India |
| *peetapushpa* | champac | *Michelia champaca* L. | I (393) | (see *champaka*) |
| *pichu* | Asiatic cotton | *Gossypium herbaceum* L. | I (602) | (see *karpasa*) |
| *pilu(ka)* | mustard tree | *Salvadora persica* L. | I (400); II (151); III (7, 9) | dry, saline, coastal areas |
| *pinditaka* | (Hindi: *pindalu*) | *Randia uliginosa* DC. | I (396) | India (except N India) |
| *pippali* | long pepper | *Piper longum* L. | II (74, 134) | W Ghats, Ka, TN |
| *plaksha* | (Hindi: *pilkhan*) | *Ficus lucescens* Blume (syn. *F. lacor* Buch.-Ham.) | I (94, 399); II (146) | N India, MP, W Peninsula |
| *priyangu* | | *Aglaia elaeagnoidea* (Juss.) Benth. | I (396); II (146) (see *shubha*) | W Peninsula |
| *puga* | areca-nut | *Areca catechu* L. | I (393); II (33, 66, 72) (see *kramuka*) | coastal Ka, Ke, TN, WB |
| *pundra* | sugarcane (red) | *Saccharum officinarum* L. | I (385, 588) | (see *ikshu*) |
| *punnaga* | Indian laurel | *Calophyllum inophyllum* L. | I (105, 400); II (66, 151) | coastal Or, Ka, MS, Andaman |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *rambha* | plantain | *Musa paradisiaca* L. | II (34, 134) | (see *kadali*) |
| *rasaka* | grape | *Vitis vinifera* L. | I (392) | (see *draksha*) |
| *rasala* | mango | *Mangifera indica* L. | II (34, 60, 62, 150) | (see *amra*) |
| *rasalaka* | Indian frankincense | *Boswellia serrata* Roxb. ex Colebr. | I (399) | drier parts of Peninsular India |
| *rashi-jatika* (?) | | | I (388); II (5) | |
| *rathadruma* | sandan | *Ougeinia oojeinensis* (Roxb.) Hochr. | II (151) | (see *tinisha*) |
| *sambaka* | rice | *Oryza sativa* L. | I (367, 368, 462) | (see *vrihi*) |
| *saptaparna* | dita bark tree | *Alstonia scholaris* (L.) R. Br. | I (398) | Peninsular India |
| *sara* | sal | *Shorea robusta* Gaertn. f. | II (132) | N, E, and Central India |
| *sarjaka* | white damar | *Vateria indica* L. | I (252, 400); II (145) | W Ghats, S India |
| *sarshapa* | mustard | *Brassica campestris* L., *B. juncea* (L.) Czern. & Coss., *B. napus* L. | I (386, 546, 576); II (104); III (3) | Pb, UP, Bi, WB |
| *sarvatobhadra* | Malay bush-beech | *Gmelina arborea* L. | II (148) | India |
| *shakuta* | (Hindi: *siora*) | *Streblus asper* Lour. | I (392); II (6, 30, 48) | drier regions of India |
| *shali* | rice | *Oryza sativa* L. | I (331, 332, 335, 337, 338, 343, 354, 362, 364, 366, 380, 408, 412, 423, 428, 433, 443, 444, 445, 456, 457, 459, 462, 477, 480, 514, 519); II (2, 3) | (see *vrihi*) |
| *shami* | (Hindi: *shami*) | *Prosopis cineraria* (L.) Druce | I (395); II (145) | arid regions of India |
| *shastika* | rice | *Oryza sativa* L. | I (362, 363) | (see *vrihi*) |
| *shavaka* | French tamarisk | *Tamarix troupii* Hole | I (389); II (5, 22, 47, 59) | N India, W Peninsula |
| *shigru* | drumstick tree | *Moringa oleifera* Lamk. | I (395); II (145); III (9) | India |
| *shirisha* | lebbeck tree, kokko | *Albizia lebbeck* (L.) Benth. | I (397); II (148) | WB, As, TN, MP, Pb, UP |
| *shriparna* | (Hindi: *bakar*) | *Premna latifolia* Roxb. | I (397); II (146) | S India, WB |
| *shubha* | | *Aglaia elaeagnoidea* (Juss.) Benth | III (7) | (see *priyangu*) |
| *shunthi* | ginger (dried) | *Zingiber officinale* Rosc. | I (391); II (7) | (see *ardraka*) |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *sindhuvara* | China chaste tree | *Vitex negundo* L. | I (397); II (149) | India |
| *suragandha* | sappan-wood (?) | *Caesalpinia sappan* L. (?) | I (35) | WB, S India |
| *surana* | elephant-foot yam | *Amorphophallus campanulatus* (Roxb.) Blume ex Dcne. | II (6, 30, 38, 47) | India |
| *tamala* | | *Garcinia pictoria* Roxb. | I (397); II (149) | W Ghats (Malabar, Nilgiris), Ka |
| *tambula* | betel | *Piper betle* L. | II (72); IV (28) | (see *nagavalli*) |
| *tandula* | rice | *Oryza sativa* L. | I (468, 528); II (12); III (34) | (see *vrihi*) |
| *tapiccha* | kokam butter tree | *Garcinia indica* (Dup.-Tho.) Choisy | II (149) | W Ghats |
| *tila* | sesame, gingelly | *Sesamum indicum* L. | I (384, 526, 534, 536, 544, 554, 561, 564, 576); II (104); III (23) | UP, MP, Rj, Or, Gj, AP, TN, MS |
| *tilaka* | (Hindi: *chanlai*) | *Wendlandia exserta* (Roxb.) DC. | I (400) | sub-Himalayan region, WB, MP, AP, MS |
| *tinduka* | Coromandel ebony | *Diospyros melanoxylon* Roxb. | I (94, 252, 400); II (146) | MP, MS, Or, UP, Bi, W Peninsula |
| *tinisha* | sandan | *Ougeinia oojeinensis* (Roxb.) Hochr. | I (36, 252, 399) (see *rathadruma*) | N and Central India |
| *tintrini* | tamarind | *Tamarindus indica* L. | I (94); II (150) | India |
| *tula* | Asiatic cotton | *Gossypium herbaceum* L. | I (387, 545, 602) | (see *karpasa*) |
| *tulasi* | sacred basil | *Ocimum sanctum* L. | II (135) | India |
| *udumbara* | cluster fig | *Ficus glomerata* Roxb. | I (399) | India |
| *valli(ka)* | false pareira root | *Cissampelos pareira* L. (?) | I (388); II (5, 22, 28, 38, 47, 67) | India |
| *vamsha* | thorny bamboo | *Bambusa arundinacea* (Retz.) Willd. | I (401); II (150) | India |
| *varnaja* (?) | | | II (149) | |
| *vartaka* | eggplant, brinjal | *Solanum melongena* L. | I (388); II (5, 22, 23, 27, 40, 43, 44, 46, 52, 59, 67); III (7, 39) | India |
| *vata* | banyan | *Ficus benghalensis* L. | I (93, 98, 399, 402); II (146) | India |
| *venu* | reed | | I (94) | India |
| *veta* | cane | *Calamus rotang* L. | I (93) | India |
| *vibhitaka* | belleric myrobalan | *Terminalia bellirica* (Gaertn.) Roxb. | II (147) | (see *bibhitaka*) |

*continued*

| Sanskrit name | English name | Latin name | Section (Verse) | Geography[2] |
|---|---|---|---|---|
| *vrihi* | rice | *Oryza sativa* L. | I (338, 367, 369, 370, 371, 372, 413, 448, 481, 482, 488, 490, 491, 493, 500, 503, 538, 541, 572) (see *dhanya kalama, sambaka, shali, shastika,* and *tandula*) | India |
| *yava* | barley | *Hordeum vulgare* (L.) emend. Bowden | I (583, 584) | northern half of India |
| *yavara* | sorghum (?) (Hindi: *jowar*) | *Sorghum bicolor* (L.) Moench | I (385, 545, 583, 584) | Deccan |

1. The Latin and English names of all Sanskrit names of plants, and the current geographical distribution in India are based on two sources:

   Abdul Kareem, M. 1997. Plants in Ayurveda. Foundation for Revitalisation of Local Health Traditions, Bangalore 560 024, India. 243 pp.

   Singh, U., Wadhwani, A.M., Johri, B.M. 1996. Dictionary of Economic Plants in India. Indian Council of Agricultural Research, New Delhi 110 012, India. 288 pp.

2. AP = Andhra Pradesh; As = Assam; Bi = Bihar; Gj = Gujarat; HP = Himachal Pradesh; J&K = Jammu and Kashmir; Ka = Karnataka; Ke = Kerala; Ma = Manipur; MP = Madhya Pradesh; MS = Mahrashtra; Or = Orissa; Pb = Punjab; Rj = Rajasthan; Si = Sikkim; TN = Tamil Nadu; UP = Uttar Pradesh; Ut = Uttaranchal; WB = West Bengal.
   E = East; W = West/Western; S = South; N = North; NW = northwestern.